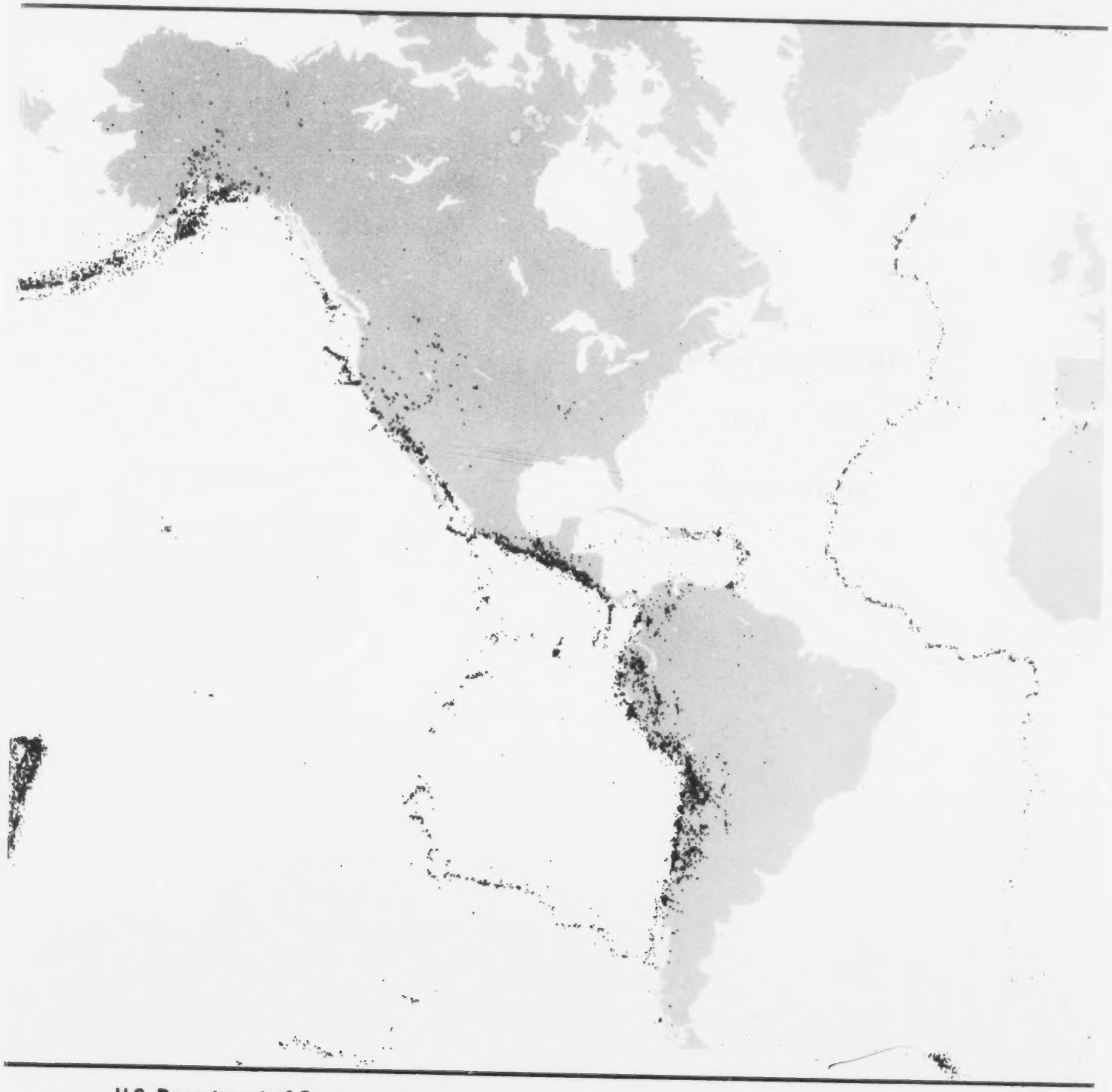
21

SUMMARY OF EARTHQUAKE DATA BASE

KEY TO GEOPHYSICAL RECORDS DOCUMENTATION NO. 21



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Environmental Satellite, Data, and Information Service
National Geophysical Data Center
Boulder, Colorado
October 1985

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KGRD No. 17, Terrestrial Geophysics Data Services and Publications.

KGRD No. 18, U.S. Land Gravity

KGRD No. 19, Summary of Earthquake Intensity File.

KGRD No. 20, Natural Hazards Photograph Catalog.

KGRD No. 21, Summary of Earthquake Data Base.

Cover: Epicenters of the world are plotted on a Mercator projection. All earthquake locations were determined using observations from 10 or more seismograph stations.

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SUMMARY OF EARTHQUAKE DATA BASE

KEY TO GEOPHYSICAL RECORDS DOCUMENTATION NO. 21

Wilbur Rinehart, Herbert Meyers, and Carl A. von Hake

National Geophysical Data Center
Boulder, Colorado
October 1985

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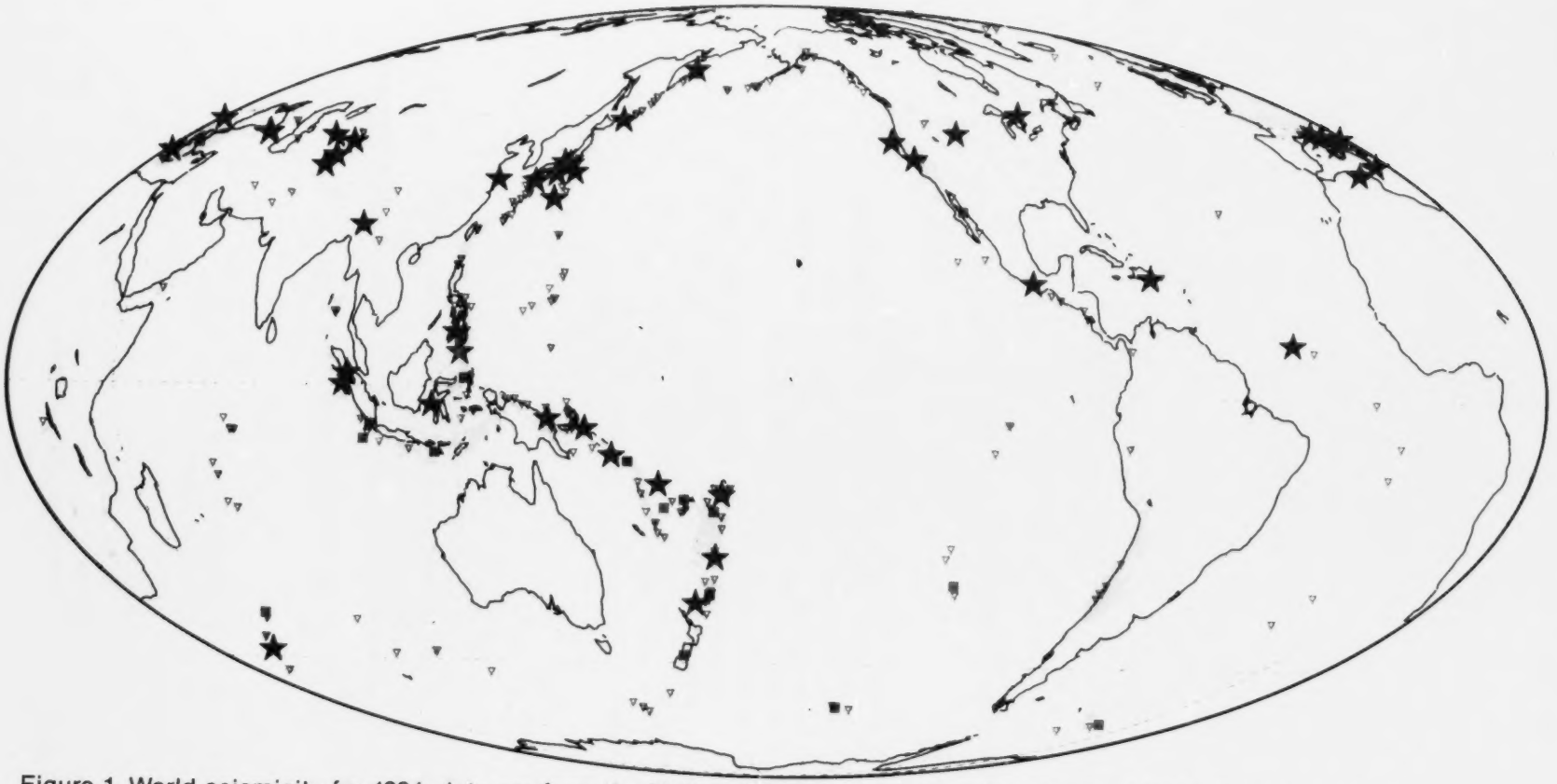


Figure 1. World seismicity for 1984; data are from the National Earthquake Information Center (USGS) Preliminary Determination of Epicenters program. Stars represent designated "significant" earthquakes.

Summary of Earthquake Data Base

by

Wilbur Rinehart, Herbert Meyers, and Carl A. von Hake

Introduction

The National Environmental Satellite, Data, and Information Service (NESDIS) has the role of collecting, managing, and disseminating the great mass of information produced by the scientific observation of interplanetary space and the physical world. Data activities in seismology, gravity, geomagnetism, marine geology and geophysics, geothermics, and solar-terrestrial physics are directed by the NESDIS National Geophysical Data Center (NGDC) in Boulder, Colorado. This catalog describes the Earthquake Data Base, one of the large collections of seismology data managed by NGDC.

The Earthquake Data Base contains information on more than 500,000 earthquakes, including the date and time of origin, geographic location, depth, magnitude, maximum intensity, and related earthquake phenomena. The data are useful for providing to the scientific and engineering community several kinds of computer searches of the seismicity of selected regions; for preparing edited lists of earthquakes sorted chronologically, geographically, or by radial distance from a center point; for plotting maps and vertical cross-sections; and for making statistical studies of earthquake occurrence.

One of the principal sources of instrumental earthquake epicenters in the NOAA Earthquake Data Base is the U.S. Geological Survey (USGS) Preliminary Determination of Epicenters (PDE) program. This program was started by the U.S. Coast and Geodetic Survey (USCGS) in 1937, but is now operated by the National Earthquake Information Center, a part of the USGS. The PDE program, which is global in scope, has contributed about 145,000 earthquake records to the Data Base. Also, data from several published catalogs have been reformated and included in the Earthquake Data Base as separate data files (see table 1 and Bibliography).

Data published in other catalogs that resulted from special areal seismicity studies have also been added to the Data Base. These data include information on earthquakes in: Northeastern, Southeastern, and Central United States; Alaska; Hawaii; Oregon; Utah; Pacific Coast and Northwestern United States; Southern, Central, and Northern California; Puerto Rico; German Federal Republic; Italy; Turkey; England; Iberian Peninsula; Canada; France; U.S.S.R.; Fennoscandia; Japan; the Caribbean; Ethiopia and Horn of Africa; New Zealand; Europe and Balkans; and People's Republic of China. Collectively, the Data Base is known as the NOAA Earthquake Data Base. This publication describes the Earthquake Data Base as it exists in December 1984. Because it is a dynamic file, new data are added monthly. This publication lists the major sources of the data, gives tabular summaries of the data, and shows examples of computer searches and graphic displays prepared using the data.

Description of the Earthquake Data Base

The Earthquake Data Base includes information on a half-million earthquakes dating from 2100 B.C. to the present. The Data Base includes for each earthquake at least the date/time of origin (in Universal Coordinated Time) and geographic location (in degrees and decimal degrees of latitude and longitude). For many earthquakes, other parameters are included, such as: depth; magnitude (determined using body and surface waves, duration, coda length, and special local instrumentation); maximum Mercalli intensity; cultural effects (casualties, damage); geological effects (liquefaction, landslides); and region numbers (see Flinn and others, 1974). The data are separated into files according to their primary source (e.g., PDE and EPB—see table 1 and list in appendix 4) or according to region, in which the data from many sources are merged on the basis of geographic or tectonic associations. Each earthquake record also contains information on the data source and the data quality. In addition to having data on earthquakes, the Data Base contains information on other phenomena that are recorded at seismological observatories, including explosions and associated collapse data, coal bumps, rockbursts, and quarry blasts.

Earthquakes that are International Data Exchange (IDE) events in the Data Base are identified in appendix 7 and carry an "X" in column 67 of the earthquake record. IDE earthquakes are those of magnitude ≥ 7.5 or are specially declared events of lower magnitude.

Many of the data fields in several earthquake records are blank, because information on that subject is not known or otherwise unavailable (e.g., faulting, uplift). Also, information on cultural effects, intensity, and other phenomena associated with earthquakes in non-U.S. areas is limited. Where more detail is needed, refer to the PDE program reports, the annual *United States Earthquakes* (USE) publications, and (or) the original source. NGDC will furnish additional bibliographic references on request.

Earthquake Locations

The quality of epicenter determinations varies significantly with different periods of time. Before 1900, most locations of epicenters were determined noninstrumentally; consequently, geographic locations given for those early events represent the approximate center of the macroseismic effects. Most instrumental epicenters prior to 1961, excluding local earthquakes in California, are located to the nearest 1/4° to 1/2° of latitude and longitude.

The year 1963 began the computer era at USCGS, and brought with it a higher accuracy in epicenter determinations. From 1963 through May 1968, epicenters were stated to tenths or hundredths of a degree. Since May 1968, however, values for the latitude and longitude of most earthquakes are given to three decimal places. This precision reflects the accuracy of the epicenters only for local earthquakes (in California and other areas where local seismic networks are maintained) and for earthquakes that are the subject of special studies.

Some of the files in the Data Base contain epicenters determined by many different institutions. Including epicenters from different institutions in a single data file produces "duplicate" records (i.e., several records for the same event) that may vary in origin time, latitude, longitude, or other descriptors. No effort has been made to identify a "favored" solution among those records in the Data Base, but, in search-retrieval listings, "duplicate" records are flagged. Likewise, some published

catalogs (Hays and others, 1975, for example) are compilations of many previous catalogs, and so retrievals from a file containing those sources may produce many "duplicate" records.

Magnitude

Magnitude is a measure of the "size" of an earthquake as recorded on a seismogram; it is related roughly to the energy released by an earthquake at its focus. The magnitude "scale" is logarithmic, which means that it has neither top nor bottom values. The largest earthquake ever recorded had a magnitude larger than 9.0 (Abe, 1983, 1984). On this scale, a magnitude 6 shallow-focus earthquake represents elastic-wave energy about 30 times more than that generated by an earthquake of magnitude 5, but about 900 times more than that of a magnitude 4 earthquake. Many factors enter into the determination of magnitude, including earthquake focal depth, frequency content of the sampled energy, and earthquake wave radiation pattern.

The Data Base contains records for many earthquakes of magnitude 4.0 or less in the United States, mainly from areas with dense seismic station networks; however, no claim is made for the statistical homogeneity of those events. Inclusion of data for earthquakes of magnitude 4.0 to 5.0 also is influenced by the proximity of seismograph stations to the epicenters.

Richter (1935) first defined magnitude as a numerical value that is related to the "size" of an earthquake. He expressed this value as the logarithm of the maximum trace amplitude measured from a standard Wood-Anderson torsion seismometer, minus the logarithm of the amplitude measured for a "standard" earthquake (defined as an earthquake having a ground motion of 0.001 mm and an epicenter at a distance of 100 km). Tables were prepared for the logarithm of the maximum trace amplitude measured for the "standard" earthquake out to a distance of 600 km, and instrumental corrections were applied to each of the southern California stations in the Pasadena network. This numerical value eventually was called a local magnitude, or M_L, and it is now referred to as "Richter magnitude." (See Richter, 1958, chapter 22, for a discussion of magnitude.)

Limitations to this magnitude scale arose immediately, because all seismic stations were not equipped with Wood-Anderson torsion seismometers. There also was a need to know the magnitudes of distant earthquakes as well, and so the "local" magnitude formula was not applicable.

Gutenberg and Richter (1956) later extended the magnitude scale by using 20-second period surface waves and instrumental corrections to relate the maximum amplitude trace to the actual ground motion. Again, tables were prepared relating the distance (station to epicenter) in degrees to the logarithm of the "standard" earthquake. Corrections were prepared for individual stations and also for the systematic geographic variations in energy release. This magnitude scale is called the M_S scale.

Recognizing that deep-focus earthquakes produce small surface-wave amplitude wave traces, Gutenberg (1945) extended the magnitude scale to include body waves. Analysis of the amplitude of the P, S, and PP waves versus distance for shallow shocks (whose magnitudes were determined using the surface-wave method) led to a body-wave magnitude scale for shallow earthquakes as well as for intermediate- and deep-focus earthquakes. Gutenberg (1945) presented a set of charts from which a logarithmic constant for the "standard" earthquake could be read as a function of depth and epicentral distance. The constant involved not only the ground amplitude of the body wave, but also the period of the body wave (in seconds). This magnitude scale is the m_b scale.

Comparative values have been given for these fundamental magnitude scales. With the advent of atomic explosions and the knowledge of their energy yield, calculations have also been developed for determining the total energy (in ergs) released by earthquakes.

Several complications and misunderstandings have arisen because of the use of various magnitude scales from different institutions to report magnitude values. In the Earthquake Data Base, the magnitude value defined in the field labeled MB (tape

position 36-40; see appendix 1) is a body-wave magnitude reported by the USGS National Earthquake Information Center and its predecessor, the U.S. Coast and Geodetic Survey. Similarly, the magnitude value reported in the MS field (tape positions 54-57; see appendix 1) is also uniquely reported by USGS. In the "Other Magnitude" field (tape positions 61-66; see appendix 1) magnitude values are given along with the authority or source for the magnitude value. In the local magnitude field (tape position 73-75), various magnitudes determined by local networks are reported. A two-letter designation (e.g., MS) and a three-letter source code for the reporting local network (e.g., PAS, BRK) identify the type and source of the magnitude. A number of magnitude scales are defined by the source agencies or institutions. The current list of magnitudes includes:

San Francisco Earthquake, April 18, 1906

ML	Local magnitude (as originally defined by C.F. Richter, 1935)
MB	Body-wave magnitude
CL	Coda-length magnitude
MS	Surface-wave magnitude
DR	Duration magnitude
NU	Nuttli magnitude
MW	Moment magnitude (Abe, 1983, 1984)
MR	Magnitude determined from energy class by Rautian for earthquakes listed in Russian Catalog (Kondorskaya and Shebalin, 1982)
LH	Magnitude MLH determined using USSR calibration curve for earthquakes in Russian Catalog (Kondorskaya and Shebalin, 1982)
LG	MBLG, defined by Nuttli (1973)
SL	MBLG modified magnitude from Stover and others (1984)
SH	Magnitude based on 3-Hz cycle reported by SLM and TUL from Stover and others (1984)
SA	Magnitude based on attenuation and felt area from Stover and others (1984)
SU	Magnitude of unknown origin or value from Stover and others (1984)
K	Reported magnitude of unknown origin or value
MC	Reported magnitude of unknown origin or value
MG	Reported magnitude of unknown origin or value

Intensity

Maximum intensities are given for many earthquakes in the Data Base. They are assigned using the Modified Mercalli Intensity Scale of 1931 (Wood and Neumann, 1931). Many of these intensities have been converted from values assigned using other scales. (See appendix 5, which includes the Mercalli Intensity Scale and comparison ratings on the Japanese, Rossi-Forel, USSR, and European scales.)

Earthquake "intensity" and earthquake "magnitude" are not comparable values. Intensity is a subjective evaluation of the effects of an earthquake on people and their works. It is a result of many factors, including distance from the epicenter of the earthquake, local geological conditions, structural properties of buildings, and earthquake magnitude. Since 1931, the United States has expressed intensity values using the Modified Mercalli Intensity Scale (see Wood and Neumann, 1931).

Depth

Depth values in the Data Base vary in accuracy, and may be as much as 50 km in error. The use of special depth phases read from seismograms, such as pP or PcP, may result in errors of about 10 kilometers in depth in hypocenter solutions. Historically, depths have been restrained to 33 kilometers (the average base of the crust) if pP and PcP phase readings are not used and if the hypocenter solution is poorly constrained.

Summary of Contents of the Earthquake Data Base

Table 2, a tabular summary of the Earthquake Data Base, gives the number of earthquakes (now in the file) by ranges of maximum reported magnitude and depth. Earthquakes that occurred prior to 1700 are grouped into a single entry—1700. Earthquakes in the periods 1701-1750, 1751-1800, 1801-1850, and 1851-1900 are grouped into the entries for 1750, 1800, 1850, and 1900, respectively. After 1900, totals are given for each year. Because instrumental magnitudes were not computed prior to 1897, those reported in table 2 and appearing in the Data Base were obtained by converting observed and reported earthquake effects into magnitude. This conversion was done by the institution computing the magnitudes, not by NGDC.

Some of the publications listed in the Bibliography define the procedures used to compute these magnitudes (Karnik, 1969; Kondorskaya and Shebalin, 1982; Richter, 1958; and Lee and others, 1976, 1978). Because no effort has been made to remove duplicate records and to unify the magnitudes given in table 2, definitive statistical studies of earthquake recurrence versus magnitude should be based on the actual records in the Data Base and not on the totals in this summary.

Earthquakes of magnitude 7.5 and larger were selected from the Data Base and are presented in table 3. Detailed information about the large and destructive earthquakes can be found in the publication "Significant Earthquakes of the World" (see Ganse and Nelson, 1981), published by NGDC in its Solid Earth Report Series as SE-27.

Data Availability

The Data Base may be searched using most combinations of sources and (or) data parameters. Elements that can be searched using Boolian (either AND or OR) conditions are:

(1) geographic boundaries (top, bottom, left, and right);

(2) area within a radius (in kilometers or degrees) around a center point;

(3) time period;

(4) date and time of occurrence;

(5) Modified Mercalli intensity range;

(6) depth;

(7) magnitude range;

(8) cultural effects (e.g., damage, casualties);

(9) Flinn-Engdahl region numbers;

(10) quality (number of stations); and

(11) associated phenomena (e.g., tsunami, volcanism, faulting).

Output from this search is available in the form of computer-printout listings (see example in table 4), page-size maps (see example in fig. 2), scaled maps, vertical cross-sections (see example in fig. 2), punched cards, and magnetic tape. The output from a search of several data files or several sources is a "merged listing," which may be sorted chronologically, geographically, or by distance from a center point.

Formats of data in the Data Base are described in appendixes 1 (magnetic tape), 2 (punched card), and 3 (printout). Explanations of codes for data sources, Modified Mercalli intensity, and Flinn-Engdahl regions are given in appendixes 4, 5, and 6, respectively.

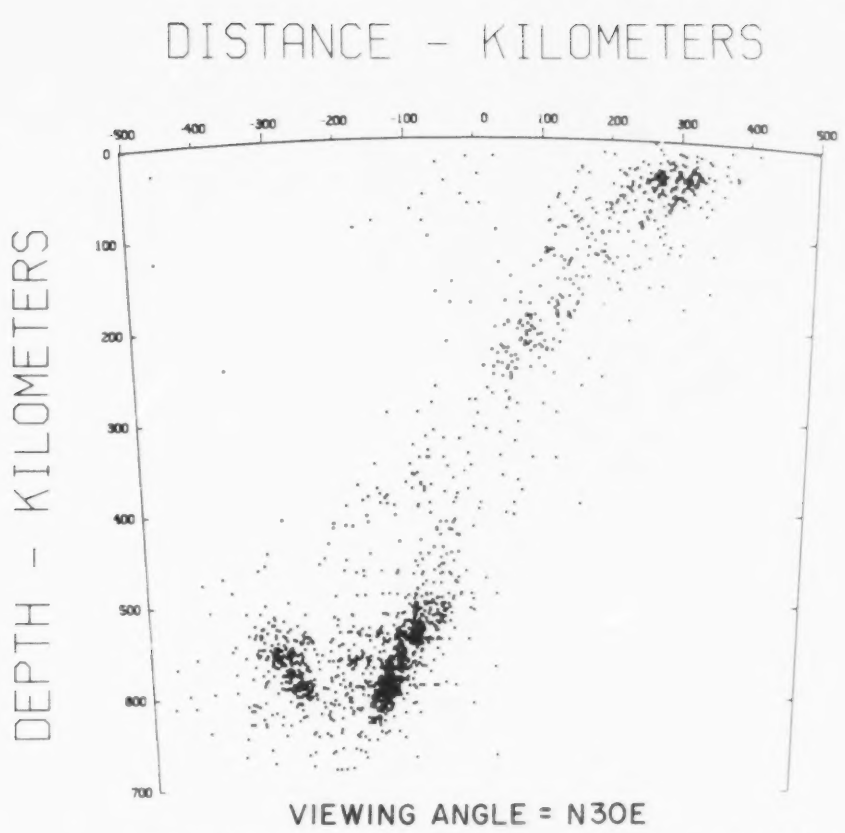
Magnetic tape copies of the entire Data Base are available, sorted chronologically or geographically, on 9-track 1,600-bpi or 6,250-bpi tape. Either ASCII or EBCDIC character sets may be requested.

Customized publication-quality maps can be drawn with ink on a mylar base to a specified scale and projection; a high-quality digitized geographic boundary is used for the base map. This service also includes a computer-prepared listing of the data. See the illustrations on the front cover and in figure 1 for examples.

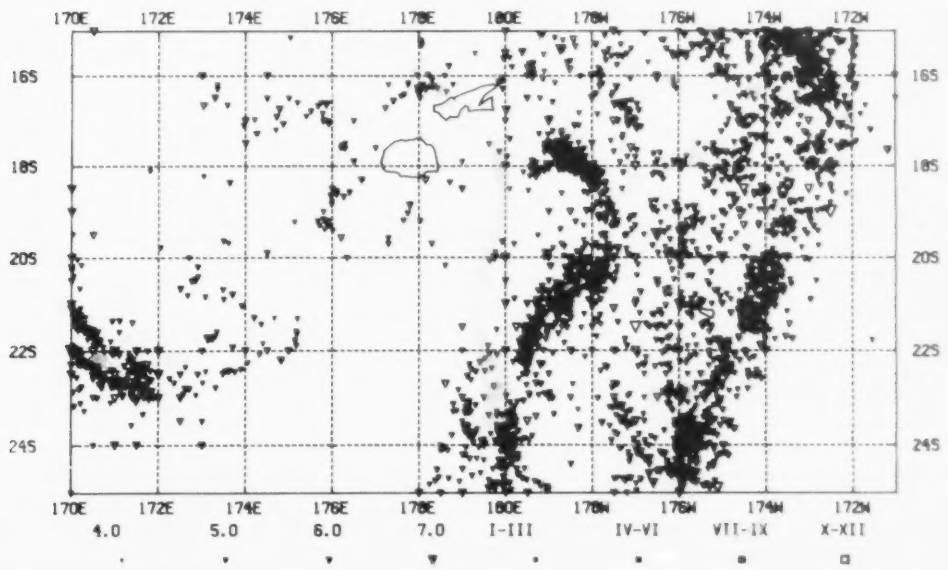
Updates of the Data Base are available on a monthly or quarterly subscription basis. Monthly increments of current updates are prepared in punched-card format from the USGS *Preliminary Determination of Epicenters*. Quarterly updates or annual end-of-the-year updates are available on magnetic tape.

Typical Searches of the Earthquake Data Base

The Data Base is used mainly for searching and retrieving lists of data using parameters such as date/time, geographic location, maximum intensity, or magnitude. Figure 1, a plot of the epicenters of worldwide earthquakes in 1984, shows the results of a combined time-location search. Table 4 is a portion of a listing prepared for Northeast California. It shows examples of suspected duplicates in the Data Base. These are flagged if they fall into a "time window" of 1 minute and a "space-window" of 1° of latitude and longitude. Figure 2 shows a page-size map of the Tonga-Fiji Islands region, and a vertical cross-section looking along a line striking N30°E passing through 22°S, 178°W.



Cross-section diagram showing depth of earthquakes in Tonga-Fiji Islands region.



Map of Tonga-Fiji Islands region, showing seismicity by magnitude.

Figure 2. Examples of map and cross-section formats for Earthquake Data Base retrievals.

Computer searches of the Data Base are made by NGDC on request, or users can obtain the Data Base on magnetic tape and do their own searches.

Sources of Data

The principal sources of data in the Earthquake Data Base are summarized below. The source for each entry in the Data Base is indicated by a 2- or 3-character code or abbreviation; these are identified in the list in appendix 4. The original sources (see Bibliography) should be acknowledged in studies where large blocks of data from the Data Base are used.

Magnitude thresholds vary radically in all these catalogs. These thresholds are functions of the times of occurrence of the earthquakes, the purpose for reporting events, and the means and methods of processing the available data by the individual researchers.

Table 5 contains the present distribution of major contributors to the Data Base and the number of events now in the Data Base associated with those contributors.

Preliminary Determination of Epicenters (PDE)

The PDE program, one of the principal sources of epicenters in the Data Base, includes about 145,000 earthquake records. It is a continuing activity begun in 1937 by the U.S. Coast and Geodetic Survey (USCGS), and conducted since 1973 by the U.S. Geological Survey (USGS). The epicenters are computed from arrival-time information provided by at least five of the 400 or more cooperating seismograph stations of the global seismograph network. These stations are operated by USGS, other Government agencies, colleges and universities, and many foreign institutions; many of them are part of the Worldwide Standardized Seismograph Network.

Prior to 1963, epicenters were located at an accuracy of about 1/2° in latitude and longitude and ± 25 km in depth. Shallow-focus epicenters were assumed to be 25 km or 33 km in depth, depending on the traveltime tables used in the computation.

Since 1963, earthquake arrival times reported by cooperating seismograph stations are processed routinely by computer. Arrival times from a minimum of five stations are required for an acceptable solution or epicenter. Epicenters are published in weekly or monthly PDE publications as soon as sufficient data have accumulated to ensure a reasonable degree of accuracy. The accuracy of the epicenters is that claimed by the institution supplying the data, and is not necessarily the accuracy indicated by the number of decimals used. Epicenters located by the USGS have a varying degree of accuracy, usually 0.2° or less; however, some are accurate only to 0.5°. (Engdahl and Gunst, 1966, describe the PDE computer program.)

Body-wave magnitudes have been computed routinely since April 1963, but surface-wave magnitudes (M_S) have been computed as part of the PDE program since May 1968. In general, these magnitudes represent an average of the values reported by individual seismograph stations. Significant deviations from a computed average are deleted, and then a new mean value is determined. The resulting values probably are accurate to within about 0.3 unit of magnitude. Other magnitude determinations (such as duration and coda-length magnitude) are sometimes reported by non-Government agencies. These magnitudes are identified on the records in columns 76-80 by DR or CL and a source code for the reporting agency. On a global basis, the PDE data file contains most of the magnitude 5 and larger earthquakes. In areas of dense seismographic coverage, such as the United States, the threshold magnitude drops to about 4.5.

Seismicity of the Earth and Associated Phenomena (G-R)

Gutenberg and Richter (1954) describe the data tabulated in their classic reference, *Seismicity of the Earth and Associated Phenomena.* About 4,000 epicenters for large earthquakes from 1904 through 1952 were added to the Data Base from this source. The source code for these data is G-R. This collection of earthquake data contains only those earthquakes of magnitude 6 and larger. Some important events recorded regionally and locally are also included.

Seismicity of the Southern California Region (PAS)

Hileman and others (1973) contributed about 15,200 epicenters to the Data Base. The data cover from January 1, 1932, to December 31, 1974. The report is essentially a local bulletin summary for the period during which personnel of the California Institute of Technology's Seismological Laboratory at Pasadena located earthquakes in the southern California region. Prior to 1961, epicentral locations were routinely determined by graphical methods, usually assuming a focal depth of 16 km. Since 1961, all epicenters have been determined by computer techniques using least-squares methods. Many of the larger pre-1961 earthquakes have been relocated using modern computer programs. The source code for these data is PAS. The areal extent of epicenters in the catalog include California south of the Transverse Range, and the Owens Valley and eastern Sierra Nevada regions. The magnitude threshold within the dense network of seismic stations is about magnitude 3.5 and larger.

Catalogue of Earthquakes in Northern California and Adjoining Areas (BRK)

About 9,400 epicenters from the report by Bolt and Miller (1975) have been included in the Data Base. The data cover from January 1, 1910, to December 31, 1974. The report includes earthquakes in northern California and adjoining areas, which were located by the University of California Seismographic Stations at Berkeley. The source code for these data is BRK. The areal extent of epicenters in this catalog includes California north of the Transverse Range and west of the Sierra Nevada. It also extends into southern Oregon and off the northern California coast. The magnitude threshold is about 3.5 inside the network of stations and about 5.0 off the coast of northern California.

Earthquake History of the United States (EQH)

This summary of significant U.S. earthquakes, revised by Coffman and others (1982), has provided much of the pre-1928 United States data now in the Earthquake Data Base. The geographic locations, which are listed to the nearest tenth of a degree, usually represent the town where the maximum intensity occurred. About 600 records covering the years 1638-1969 were taken from this source. This file has been merged with the PDE data on the magnetic tape, because some of the refined epicenters in the EQH data set have replaced those originally in the PDE set.

Because of the changes in the distribution of seismic stations, the magnitude threshold varies with time. But from the beginning of instrumental recording in the United States, the threshold has never been below 4.5. Since the installation of the Worldwide Standardized Seismic Network in the mid-1960's, the magnitude threshold is lower in some areas.

United States Earthquakes (USE)

For earthquakes in the United States, most of the "felt" information in the Data Base, which includes maximum Mercalli intensity values, associated phenomena (faulting, tsunami), cultural effects (damage, casualties), geological effects (liquefaction, landslides), and some of the instrumental data have been taken from this source. Data cover the years from 1927 through 1970 and include about 1,400 earthquakes. The source code for these data is USE. This data set has also been merged with the PDE data on the magnetic tape. The magnitude threshold is about 4.5 for the data file.

Catalog of Earthquakes Along the San Andreas Fault System in Central California (CCN)

USGS has operated a microearthquake network between Hollister and San Francisco since 1969. A description of the original network is published in Eaton and others (1970). A series of annual catalogs (through 1971) and quarterly catalogs (1972-77) has been published as Open-File Reports by USGS, and about 68,500 epicenters from this source were added to the Data Base. The source code for these data is CCN. Because of the high density of seismometers within this network of stations and the advanced computer technology used to locate earthquake hypocenters, the current magnitude threshold along the San Andreas fault system is near magnitude 0 to 1. This threshold falls off rapidly to 3.5 outside the network and also varies with time. Early magnitudes were determined using less-sophisticated reporting and location procedures, and had a threshold of only about magnitude 1. Because the station coverage is not uniform, the magnitude threshold varies from area to area.

Other Sources

Other sources used to develop the Earthquake Data Base include monthly publications of the Bureau Central International de Seismologique (1950-61), and the International Seismological Centre (1918-59).

Additional sources of data in the Data Base were provided by:

Academy of Science of the U.S.S.R. (annual bulletins);
Alaska Earthquake Analysis Center (1979);
Algermissen and others (1969);
Bath (1956);
Bath and Duda (1979);
Biswas (1984);
Couch and others (1974);
Department of Energy, Mines, and Resources of Canada (annual catalogs);
Hays and others (1975);
Japan Meteorological Agency (1958);
Karnik (1969, 1971);
Kondorskaya and Shebalin (1982);
Lamont-Doherty Geological Observatory (1984);
Lee and others (1976, 1978);
Mayer-Rosa (1980);
New Zealand Department of Scientific and Industrial Research (annual bulletins);
Nuttli (1979);
Panasenko (1977);
Real and others (1978);
Shebalin and others (1974);
Smith (1976);
Stover and others (1984);
Sykes (1963; 1965; 1966);
Sykes and Ewing (1964);
Sykes and Landisman (1964);
Taggart and Baldwin (1982);
Toppozada and others (1978);
Townley and Allen (1939); and
U.S. Geological Survey (1969-77, 1970-76).

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Bibliography

Abe, Katsuyuki, 1983: "Revision of Magnitudes of Large Shallow Earthquakes, 1897-1912," *Physics of the Earth and Planetary Interiors,* v. 33, Elsevier Science Publishers B.V., Amsterdam, The Netherlands, pp. 1-11.

Abe, Katsuyuki, 1984: "Complements to 'Magnitudes of Large Shallow Earthquakes from 1904 to 1980,' " *Physics of the Earth and Planetary Interiors,* v. 34, Elsevier Science Publishers B.V., Amsterdam, The Netherlands, pp. 17-23.

Academy of Science of the U.S.S.R., annual bulletins: *Earthquakes of the U.S.S.R.,* Institute of the Physics of the Earth, Moscow.

Alaska Earthquake Analysis Center, 1979: *Summary of Alaskan Earthquakes: October, November, December 1978,* Seismological Bulletin No. 6, Geophysical Institute, University of Alaska, Fairbanks, AK.

Algermissen, S.T., W.A. Rinehart, R.W. Sherburne, and W.H. Dillinger, Jr., 1969: "Preshocks and Aftershocks of the Prince William Sound Earthquake of March 28, 1964," *The Prince William Sound, Alaska, Earthquake of 1964 and Aftershocks,* v. II, Parts B & C, Publication 10-3, U.S. Department of Commerce, ESSA, Coast and Geodetic Survey (United States Government Printing Office, Washington, D.C.), 350 pp.

Arabasz, Walter J., Robert B. Smith, and William D. Richins, 1979: *Earthquake Studies in Utah, 1850, 1978,* University of Utah Seismograph Stations, Department of Geology and Geophysics, University of Utah, Salt Lake City, 552 pp.

Barstow, N.L., K.G. Brill, O.W. Nuttli, and P.W. Pomeroy, 1981: *An Approach to Seismic Zonation for Siting Nuclear Electric Power Generating Facilities in the Eastern United States,* NUREG G/CR-1577, Washington, DC.

Bath, Markus, 1956: "An Earthquake Catalogue for Fennoscandia for Years 1891-1950," *Sveriges Geologiska Undersokning,* Ser. C, No. 545, Stockholm, Sweden, 52 pp.

Bath, M., and S. Duda, S.J., 1979: *Some Aspects of Global Seismicity,* Report No. 1-79, Seismological Institute, Uppsala, Sweden, 41 pp.

Biswas, N.N., May 1984 (personal communication), Institute of Geophysics, University of Alaska, Fairbanks, AK.

Bollinger, G.A., 1979: "Attenuation of the Lg Phase and the Determination of m_b in the Southeastern United States," *Bulletin of the Seismological Society of America,* v. 69, No. 1, pp. 45-63.

Bolt, Bruce A., and Roy D. Miller, 1975: *Catalogue of Earthquakes in Northern California and Adjoining Areas, 1 January 1910-31, December 1972,* Seismographic Stations, University of California, Berkeley, CA, 567 pp.

Bureau Central International de Seismologique, 1950-61: *Bulletin Mensuel,* Strasbourg, France.

Coffman, Jerry L., Carl A. von Hake, and Carl W. Stover, 1982: *Earthquake History of the United States,* Publication 41-1, Revised Edition (Through 1970), With Supplement (1971-80), National Oceanic and Atmospheric Administration, NESDIS/NGDC, Boulder, CO, 208 pp.

Couch, Richard, Linda Victor, and Kenneth Keeling, 1974: *Coastal and Offshore Earthquakes of the Pacific Northwest Between 39° and 40° 10′ N. Latitude and 123° and 131° W. Longitude,* School of Oceanography, Oregon State University, Corvallis, OR, 67 pp.

Department of Energy, Mines, and Resources Canada, Earth Physics Branch, annual catalogs: *Canadian Earthquakes, Seismological Series* through 1981; *Canadian Seismograph Operations* 1982 and after; Ottawa, Canada.

Docekal, Jerry, 1970: *Earthquakes of the Stable Interior, with Emphasis on the Midcontinent,* v. 2, University of Nebraska Ph.D. dissertation, Lincoln, NE, University Microfilms Ltd., Ann Arbor, MI, 332 pp.

Eastern Section of the Seismological Society of America, various issues: *Earthquake Notes.*

Eaton, J.P., W.H.K. Lee, and L.C. Pakiser, 1970: "Use of Microearthquakes in the Study of the Mechanics of Earthquake Generation Along the San Andreas Fault in Central California," *Tectonophysics,* v. 9, pp. 259-282.

Engdahl, E.R., and Robert H. Gunst, April 1966: "Use of a High Speed Computer for the Preliminary Determination of Earthquake Hypocenters," *Bulletin of the Seismological Society of America* , v. 56, No. 2, pp. 325-336.

Engdahl, E.R., 1981 (personal communication), U.S. Geological Survey, Golden, CO.

Flinn, Edward A., E. R. Engdahl, and Alan R. Hill, June 1974: "Seismic and Geographical Regionalization," *Bulletin of the Seismological Society of America,* v. 64, No. 3, Part II, pp. 771-993. (A number of changes in the geographic region names have been introduced by the U.S. Geological Survey to reflect either recent political changes or usages more common than the names used in the past. No boundary changes or corresponding Flinn-Engdahl region number changes were made.)

Ganse, Robert A., and John B. Nelson, July 1981: *Catalog of Significant Earthquakes, 2000 B.C.-1979, Including Quantitative Casualties and Damage,* Report SE-27, World Data Center A for Solid Earth Geophysics, National Oceanic and Atmospheric Administration, EDIS/NGSDC, Boulder, CO, 154 pp.

Gutenberg, B., and C.F. Richter, 1954: "On Seismic Waves (third paper)," *G. Beitr.,* v. 47, pp. 73-131.

Gutenberg, B., 1945: "Magnitude Determination for Deep-Focus Earthquakes," *Bulletin of the Seismological Society of America,* v. 35, pp. 117-130.

Gutenberg, B., and C.F. Richter, 1954: *Seismicity of the Earth and Associated Phenomena,* Princeton University Press (second edition); facsimile of 1954 edition published in 1965 by Hafner Publishing Company, New York, 310 pp.

Gutenberg, B., and C.F. Richter, 1956: "Magnitude and Energy of Earthquakes," *Annali di Geofisica,* v. 9, pp. 1-15.

Hays, Walter W., S.T. Algermissen, Alvaro F. Espinosa, David M. Perkins, and Wilbur A. Rinehart, 1975: "Catalog of Historical U.S. Earthquakes," Appendix A, *Guidelines for Developing Design Earthquake Response Spectra* (Technical Report M-114), Construction Engineering Research Laboratory, P.O. Box 4005, Champaign, IL, 349 pp.

Hileman, James A., Clarence R. Allen, and John M. Nordquist, 1973: *Seismicity of the Southern California Region, 1 January 1932 to 31 December 1972,* Seismological Laboratory, California Institute of Technology, Pasadena, CA, 490 pp.

International Seismological Centre, 1918-59: *International Seismological Summary,* Kew, United Kingdom.

Japan Meteorological Agency, June 1958: "Catalog of Major Earthquakes Which Occurred In and Near Japan (1926-56)," *The Seismological Bulletin of the Japan Meteorological Agency,* Supplementary Volume #1, Tokyo, 91 pp.

Karnik, V., 1969: *Seismicity of the European Area,* Part 1, D. Reidel Publishing Company, Dordrecht, The Netherlands.

Karnik, V., 1971: *Seismicity of the European Area,* Part 2, D. Reidel Publishing Company Dordrecht, The Netherlands.

Kondorskaya, N.V., and N.V. Shebalin, Editors, 1982 (Russian Edition, 1975): *New Catalog of Strong Earthquakes in the U.S.S.R. from Ancient Times Through 1977,* Report SE-31, World Data Center-A for Solid Earth Geophysics, Boulder, CO, 608 pp.

Lamont-Doherty Geological Observatory, 1984 (personal communication), Columbia University, Palisades, NY.

Lee, W.H.K., F.T. Wu, and Carl Jacobsen, 1976: "A Catalog of Historical Earthquakes in China," *Bulletin of the Seismological Society of America,* v. 66, No. 6, pp. 2003-2016.

Lee, W.H.K., F.T. Wu, and S.C. Wang, 1978: "A Catalog of Instrumentally Determined Earthquakes in China (Magnitude >6), Compiled from Various Sources," *Bulletin of the Seismological Society of America,* v. 68, No. 2, pp. 383-398.

Macmillan Journals Ltd., various issues: *Nature,* International Weekly Journal of Science, United Kingdom.

Mayer-Rosa, D., April 23, 1980 (personal communication), Swiss Seismic Service, ETH, Zurich, Switzerland.

Medvedev, S.V., 1962: *Engineering Seismology,* Institute of Physics of the Earth, Academy of Sciences of the USSR, Moscow. (English translation available from the U.S. Department of Commerce, Washington, DC), 260 pp.

New Zealand Department of Scientific and Industrial Research, Geophysics Division, annual bulletins: *New Zealand Seismology Report, Seismological Observatory Bulletin,* Wellington, New Zealand.

Nuttli, Otto W., 1973: "Seismic Wave Attenuations and Magnitude Relations for Eastern North America," *J. Geophys. Res.,* v. 78, pp. 876-885.

Nuttli, Otto W., 1979: "Seismicity of the Central United States," *Reviews in Engineering Geology,* v. IV, Geological Society of America, pp. 67-93.

Panasenko, G.D., 1977: *Fennoscandian Earthquakes in 1951-1970 (Catalogue),* Soviet Geophysical Committee of the Academy of the USSR, Moscow, 111 pp.

Real, C.R., T.R. Toppozada, and D.L. Park, 1978: *Earthquake Catalog of California, January 1, 1900-December 31, 1974,* California Division of Mines and Geology Special Publication 52, Sacramento, CA.

Richter, Charles F., 1935: "An Instrumental Earthquake Scale," *Bulletin of the Seismological Society of America,* v. 25, pp. 1-32.

Richter, Charles F., 1958: *Elementary Seismology,* W.H. Freeman and Company, San Francisco, CA, 768 pp.

Rogers, A.M., and A. Malkiel, 1979: "A Study of Earthquakes in the Permian Basin of Texas-New Mexico," *Bulletin of the Seismological Society of America,* v. 69, No. 3, pp. 843-865.

Shebalin, N.V., V. Karnik, and D. Hadzievski, 1974: *Catalogue of Earthquakes, UNDP/UNESCO Survey of the Seismicity of the Balkan Region,* Parts I (1901-1970) and II (prior to 1901), Printing Office of the University Kiril and Metodij, Skopje, Yugoslavia.

Smith, W.D., 1976: "Computer File of New Zealand Earthquakes," *New Zealand Journal of Geology and Geophysics,* v. 19, No. 3, pp. 393-394.

Stover, C.W., B.G. Reagor, and S.T. Algermissen, 1984: *United States Earthquake Data File,* Open-File Report 84-225, United States Department of the Interior, Geological Survey, Denver, CO, 123 pp.

Street, R.L., and F.T. Turcotte, 1977: "A Study of Northeastern North American Spectral Moments, Magnitudes, and Intensity," *Bulletin of the Seismological Society of America,* v. 67, No. 3, p. 599-614.

Sykes, Lynn R., November 1963: "Seismicity of the South Pacific Ocean," *Journal of Geophysical Research,* v. 68, No. 21, pp. 5999-6006.

Sykes, Lynn R., April 1965: "Seismicity of the Arctic," *Bulletin of the Seismological Society of America,* v. 55, No. 2, pp. 501-518.

Sykes, Lynn R., June 15, 1966: "The Seismicity and Deep Structure of Island Arcs," *Journal of Geophysical Research,* v. 71, No. 12, pp. 2981-3006.

Sykes, Lynn R., and Maurice Ewing, October 15, 1964: "The Seismicity of the Caribbean Region," *Journal of Geophysical Research,* v. 70, No. 20, pp. 5065-5074.

Sykes, Lynn R., and Mark Landisman, December 1964: "The Seismicity of East Africa, the Gulf of Aden, and the Arabian and the Red Seas," *Bulletin of the Seismological Society of America,* v. 54, No. 6, pp. 1927-1940.

Taggart, James, and Frank Baldwin, 1982: "Earthquake Sequence of 1938-1939 in Mogollon Mountains, New Mexico," *New Mexico Geology,* v. 4, pp. 49-52.

Toppozada, T.R., C.R. Real, S.P. Bezore, and D.L. Park, 1978: "Seismicity of California Before 1900," *Earthquake Notes,* v. 49, No. 4, p. 86.

Townley, Sidney D., and Maxwell W. Allen, 1939: "Descriptive Catalog of Earthquakes of the Pacific Coast of the United States, 1769 to 1928," *Bulletin of the Seismological Society of America,* v. 29, No. 1, pp. 1-297.

U.S. Department of Commerce, 1928-1981: *United States Earthquakes,* published annually 1928-81 by: U.S. Coast and Geodetic Survey from 1928-68; National Oceanic and Atmospheric Administration (NOAA) from 1969-72; NOAA/U.S. Geological Survey, 1973-80; and U.S. Geological Survey, 1981.

U.S. Geological Survey, 1969-77: *Catalog of Earthquakes Along the San Andreas Fault System in Central California* (series of Open-File Reports; published annually 1969-71; quarterly 1972-77), Menlo Park, CA.

U.S. Geological Survey, 1970-76: "Hawaiian Volcano Observatory Summaries," series of annual catalogs.

U.S. Geological Survey, monthly listings: *Preliminary Determination of Epicenters,* National Earthquake Information Center, Golden, CO.

Wood, Harry O., and Frank Neumann, December 1931: "Modified Mercalli Intensity Scale of 1931," *Bulletin of the Seismological Society of America,* v. 21, No. 4, pp. 277-283.

Table 1. Sources Used in Compiling the Earthquake Data Base

[See appendix 4 for definition of codes in "Sources" column; see Table 2 for additional information on Files 1 through 11]

"PDE-EQH-USE" FILE (FILE 1)

Sources	First Year	Last Year	Number of Records
EQH	1638	1969	600
USE	1927	1970	1,371
PDE	1937	1984	145,062
	Total Number of Records:		147,033

SPECIAL INTERNATIONAL EARTHQUAKE CATALOG FILE (FILE 2)

BDA	1897	1977	1,490
G-R	1904	1952	4,039
ISS	1918	1959	16,452
BCI	1950	1961	3,701
SYK	1950	1960	1,167
	Total Number of Records:		26,849

CALIFORNIA DATA FILE (FILE 3)

T-A	1769	1927	4,166
DMG	1900	1974	39,578
BRK	1910	1974	9,430
PAS	1932	1974	15,200
CCN	1969	1983	68,484
	Total Number of Records:		136,858

UNITED STATES (EXCLUDING AK AND HI) DATA FILE (FILE 4)

USN	1534	1974	30,607
STO	1568	1981	5,147
OWN	1811	1975	1,112
OSU	1853	1973	2,220
NEN	1969	1971	2
LDO	1974	1980	86
	Total Number of Records:		39,174

ALASKAN DATA FILE (FILE 5)

STA	1964	1966	2,141
ERE	1969	1973	9,665
LDO	1973	1984	4,822
GIA	1977	1978	57
	Total Number of Records:		16,685

HAWAIIAN DATA FILE (FILE 6)

HVO	1961	1976	31,161
	Total Number of Records:		31,161

CANADIAN DATA FILE (FILE 7)

EPB	1568	1980	11,924
OTT	1946	1961	4
	Total Number of Records:		11,928

EUROPEAN DATA FILE (FILE 8)

KRK	-2100	1970	13,256
TRI	2	1971	10,591
ZUR	1021	1971	2,431
FRG	1021	1982	1,532
FEN	1891	1976	1,894
UPP	1957	1959	15
BRG	1962	1976	3,630
	Total Number of Records:		33,349

USSR DATA FILE (FILE 9)

SSR	-2000	1980	85,425
MOS	1950	1961	304
	Total Number of Records:		85,729

PEOPLE'S REPUBLIC OF CHINA, NEW ZEALAND, AND TURKEY DATA FILE (FILE 10)

Sources	First Year	Last Year	Number of Records
LEE	-1177	1976	1,145
ANK	11	1975	3,621
WDS	1460	1977	16,899
PEK	1959	1959	8
	Total Number of Records:		21,673

MULTISOURCE GLOBAL DATA FILE (FILE 11)

HIG	1868	1868	1
CFR	1897	1903	53
BSS	1920	1920	1
TRI	1950	1955	3
MER	1950	1950	1
PRA	1950	1959	5
TAC	1950	1560	459
ROM	1950	1961	31
DJA	1950	1950	1
STR	1951	1951	3
TOK	1951	1951	1
WEL	1952	1961	439
ALI	1952	1960	28
LIS	1953	1960	3
SHL	1953	1960	20
LWI	1953	1958	4
API	1953	1956	35
UCC	1954	1954	1
BOG	1954	1960	41
JOH	1954	1957	4
REY	1955	1961	12
STU	1955	1961	10
ALG	1955	1960	7
MAN	1955	1955	1
QUE	1956	1960	47
BUC	1956	1960	9
RIV	1956	1956	1
BRA	1956	1956	1
OAX	1957	1957	1
TRN	1957	1957	1
MAL	1957	1957	1
HEL	1958	1960	3
APA	1958	1958	1
PMG	1959	1960	21
NOU	1960	1960	11
WAR	1960	1960	1
TEH	1960	1960	1
ALM	1960	1960	2
SHI	1960	1960	2
BNS	1960	1961	3
SSS	1961	1961	25
SEA	1961	1980	7
CAN	1961	1961	15
LJU	1961	1961	1
CAR	1961	1961	2
AEC	1961	1968	146
CHC	1963	1963	1
NES	1966	1966	2
BLA	1968	1968	1
LAO	1969	1969	1
UBC	1973	1974	11
SLM	1974	1974	2
CSC	1974	1974	3
WES	1976	1980	93
APF	1979	1979	1
	Total Number of Records:		1,581

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH FOR THE "PDE-EQH-USE" DATA FILE (FILE 1)

YEAR*	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
1750	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
1800	15	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15
1850	35	0	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	35
1900	198	0	0	0	0	0	0	0	0	0	0	1	0	199	1	0	0	198
1901	10	0	0	0	0	0	0	0	0	0	0	1	0	11	1	0	0	10
1902	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8
1903	14	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14
1904	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
1905	9	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9
1906	17	0	0	0	0	0	0	1	0	0	0	0	0	18	0	0	0	18
1907	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8
1908	10	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10
1909	13	0	0	0	0	0	0	1	0	1	0	0	0	15	0	0	0	15
1910	10	0	0	0	0	0	0	1	0	0	0	0	0	11	0	0	0	11
1911	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5
1912	9	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9
1913	11	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11
1914	12	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12
1915	15	0	0	0	0	0	0	2	0	0	0	0	0	17	0	0	0	17
1916	18	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18
1917	9	0	1	0	0	0	0	0	0	1	0	0	0	11	0	0	0	11
1918	13	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	13
1919	7	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7
1920	9	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9
1921	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8
1922	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
1923	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
1924	7	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7
1925	14	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14
1926	10	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10
1927	9	0	0	0	0	0	1	0	0	0	0	0	0	10	1	0	0	9
1928	71	0	0	0	0	0	0	0	0	0	0	0	0	71	0	0	1	70
1929	60	0	0	0	1	0	0	0	0	0	0	0	0	61	0	0	0	61
1930	81	0	0	0	1	1	0	0	0	0	0	0	0	83	0	0	0	83
1931	28	0	0	0	0	0	0	1	0	0	0	0	0	29	0	0	0	29
1932	20	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	20
1933	28	0	0	0	0	0	1	0	0	0	0	0	0	29	0	0	0	29
1934	32	0	0	0	0	0	0	0	0	0	0	0	0	32	1	0	0	31
1935	60	0	0	0	0	0	0	0	0	0	0	0	0	60	6	1	1	52
1936	88	0	0	0	0	0	0	0	0	0	0	0	0	88	1	1	0	86
1937	130	0	0	0	0	0	0	0	0	0	0	0	0	130	13	0	1	116
1938	206	0	0	0	0	0	0	0	0	0	0	0	0	206	1	2	0	203
1939	166	0	0	0	0	0	0	0	0	0	0	0	0	166	3	7	1	155
1940	161	0	0	0	0	0	0	0	0	0	0	0	0	161	2	26	2	131
1941	102	0	0	0	0	0	0	0	0	0	0	0	0	102	1	7	0	94
1942	145	0	0	0	0	0	0	0	0	0	0	0	0	145	0	3	0	142
1943	95	0	0	0	0	0	0	0	0	0	0	0	0	95	0	7	0	88
1944	128	0	0	0	0	0	0	0	0	0	0	0	0	128	0	5	1	122
1945	181	0	2	0	1	3	1	1	1	1	0	0	0	191	3	17	8	163
1946	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
1947	10	0	0	0	0	0	0	0	0	1	0	0	0	11	0	0	0	11
1948	3	0	0	0	0	0	0	1	2	1	0	0	0	7	1	1	0	5
1949	349	0	1	1	2	1	0	9	27	6	0	0	0	396	16	72	13	295
1950	214	1	1	3	1	1	2	7	13	1	0	0	0	244	8	37	12	187

*Earthquakes reported prior to 1700 are grouped into a single entry (1700). Earthquakes in the periods 1701-1750, 1751-1800, 1801-1850, and 1851-1900 are grouped into the entries for 1750, 1800, 1850, and 1900, respectively. After the year 1900, totals are given for each year.

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE "PDE-EQH-USE" DATA FILE (FILE 1)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	67	0	0	0	1	0	1	2	6	2	0	0	0	79	7	19	5	48
1952	80	0	0	0	0	1	2	2	0	0	0	0	0	85	3	1	1	80
1953	179	0	0	0	1	1	1	0	6	3	2	0	0	193	13	12	1	167
1954	369	0	0	0	0	2	23	20	42	4	0	0	0	460	24	57	27	352
1955	529	0	0	1	3	6	16	27	52	5	0	0	0	639	22	82	41	494
1956	504	0	0	1	0	9	17	40	24	6	1	0	0	602	21	91	38	452
1957	782	0	0	1	0	15	31	44	50	6	4	1	0	934	18	84	41	791
1958	750	0	0	1	5	13	30	39	32	2	2	0	0	874	23	113	45	693
1959	614	3	4	3	10	18	21	19	25	2	0	1	0	720	25	115	14	566
1960	1365	3	0	7	20	67	65	63	70	11	1	0	1	1673	508	352	42	771
1961	2071	75	24	39	102	141	152	95	47	8	3	0	0	2757	1916	631	192	18
1962	2275	4	23	13	21	19	16	29	34	12	0	0	0	2446	1595	604	173	74
1963	827	24	269	1163	1152	535	198	56	13	10	1	1	0	4249	3108	860	270	11
1964	405	11	383	1318	1432	765	269	80	20	8	0	1	0	4692	3463	932	270	27
1965	366	15	378	1743	2008	1124	409	100	57	10	4	0	0	6214	4704	1124	358	28
1966	611	40	458	1522	1675	917	215	54	25	4	4	0	0	5525	3937	1200	314	74
1967	552	60	363	1432	1613	902	235	75	27	1	1	0	0	5261	3732	1213	270	46
1968	675	42	315	1459	1737	967	268	62	15	9	3	0	0	5552	4233	1035	259	25
1969	707	54	256	1138	1641	1001	252	73	26	14	3	1	0	5166	3704	1120	259	83
1970	305	72	143	797	1603	946	266	80	38	15	5	0	0	4270	3106	879	184	101
1971	506	61	139	737	1601	1057	274	78	34	13	6	1	0	4507	3320	927	204	56
1972	491	64	252	791	1509	1019	297	85	25	12	3	0	0	4548	3225	1062	229	32
1973	647	165	348	1004	1572	1032	299	65	30	6	7	0	0	5175	3818	1053	251	53
1974	457	200	311	938	1660	1052	260	69	30	12	2	0	0	4991	3629	1078	246	38
1975	547	287	307	835	1773	1146	301	70	37	7	7	1	0	5318	3993	1042	250	33
1976	1275	391	312	701	1849	1313	336	82	32	12	3	2	0	6308	4762	1219	273	54
1977	1049	331	202	574	1833	1353	333	71	18	8	3	2	0	5777	4249	1175	314	39
1978	1240	558	393	873	1729	1207	318	68	25	9	7	1	0	6428	4856	1252	272	48
1979	1317	771	620	1156	1880	1114	254	71	29	9	5	0	0	7226	5438	1423	313	52
1980	853	1049	757	1177	2095	1060	239	73	32	11	2	1	0	7349	5716	1280	300	53
1981	1157	654	541	1185	2031	948	221	70	20	9	4	0	0	6840	5258	1313	223	46
1982	1694	763	537	1152	2080	1163	263	61	24	8	2	0	0	7747	6034	1426	230	57
1983	2298	1082	601	1124	2166	1248	292	86	31	9	3	0	0	8940	7141	1482	271	46
1984	3074	1390	668	1216	2467	1297	282	74	17	7	1	0	0	10493	8142	1870	384	97
TOTAL	33525	8170	8609	24105	39275	23464	6461	2007	1036	276	89	15	1	147033	103802	28312	6604	8315

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR SPECIAL INTERNATIONAL EARTHQUAKE CATALOGS FILE (FILE 2)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1850	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	12	6	5	23	23	0	0	0
1901	0	0	0	0	0	0	0	0	0	0	10	6	0	16	16	0	0	0
1902	0	0	0	0	0	0	0	0	0	0	4	3	1	8	8	0	0	0
1903	0	0	0	0	0	0	0	0	0	0	3	5	0	8	5	2	1	0
1904	0	0	0	0	0	0	0	0	0	0	8	8	0	16	11	0	2	3
1905	0	0	0	0	0	0	0	0	1	13	15	4	4	37	26	8	3	0
1906	0	0	0	0	0	0	0	0	1	17	10	10	4	42	31	8	2	1
1907	0	0	0	0	0	0	0	0	5	21	10	4	0	40	20	12	7	1
1908	0	0	0	0	0	0	0	0	5	11	4	3	0	23	12	10	1	0
1909	0	0	0	0	0	0	0	0	6	25	11	5	0	47	21	21	2	3
1910	0	0	0	0	0	0	0	2	8	36	6	3	2	57	16	29	8	4
1911	0	0	0	0	0	0	1	2	12	19	11	2	4	51	14	24	7	6
1912	0	0	0	0	0	0	1	6	15	21	10	0	0	53	14	24	7	8
1913	2	0	0	0	0	0	4	4	5	18	7	5	0	45	18	18	0	9
1914	0	0	0	0	0	0	1	2	7	19	6	2	2	39	11	18	2	8
1915	0	0	0	0	0	0	1	3	10	16	11	2	0	43	12	14	5	12
1916	0	0	0	0	0	0	1	2	2	15	17	4	0	41	15	15	4	7
1917	0	0	0	0	0	0	0	0	2	8	9	2	4	25	16	4	2	3
1918	354	0	0	0	0	0	2	3	11	20	16	6	0	412	19	18	12	363
1919	307	0	0	0	0	0	1	4	6	22	2	6	0	348	16	24	1	307
1920	307	0	0	0	0	0	3	11	14	8	2	4	2	351	13	13	8	317
1921	261	0	0	0	0	0	6	12	6	12	8	2	0	307	9	19	8	271
1922	340	0	0	0	0	0	4	9	10	20	6	2	0	391	13	14	9	355
1923	481	0	0	0	0	0	15	11	13	38	4	4	0	566	30	13	7	516
1924	452	0	0	0	0	0	18	15	21	28	2	4	0	540	16	24	18	482
1925	483	0	0	0	0	0	10	23	28	30	4	0	0	578	31	20	10	517
1926	618	0	0	0	0	0	25	32	24	28	8	2	0	737	23	49	12	653
1927	660	0	0	0	0	2	27	36	34	28	2	2	0	791	34	46	21	690
1928	594	0	0	0	0	0	19	42	30	26	8	4	0	723	30	28	17	648
1929	593	0	0	0	0	1	37	38	29	24	8	2	2	734	24	31	10	669
1930	649	0	0	0	0	6	28	32	26	20	0	0	0	761	16	30	14	701
1931	631	0	0	0	0	5	74	81	50	36	14	2	0	893	31	53	19	790
1932	577	0	0	0	0	2	88	87	62	11	6	4	0	837	37	73	41	686
1933	655	0	0	0	0	8	86	104	56	18	4	0	2	933	40	70	39	784
1934	568	0	0	0	0	3	60	94	65	27	6	4	0	827	30	69	22	706
1935	780	0	0	0	0	3	34	80	32	34	8	2	0	973	33	56	32	852
1936	547	0	0	0	0	1	45	36	39	34	2	0	0	704	33	57	23	591
1937	482	0	0	0	0	5	27	43	32	34	6	2	0	631	30	69	17	515
1938	479	0	0	0	0	10	39	37	43	34	12	0	4	658	60	62	13	523
1939	411	0	0	0	0	4	77	42	31	30	4	4	2	605	37	74	24	470
1940	354	0	0	0	0	4	55	54	48	34	4	2	0	555	34	79	26	416
1941	450	0	0	0	0	4	70	64	42	36	6	2	2	676	37	78	19	542
1942	348	0	0	0	0	0	19	14	23	40	4	6	2	456	34	51	10	361
1943	0	0	0	0	0	0	16	17	35	58	17	5	0	148	40	47	6	55
1944	0	0	0	0	0	0	12	28	25	52	8	2	0	127	42	38	7	40
1945	0	0	0	0	0	0	4	9	24	48	2	2	0	89	40	21	4	24
1946	0	0	0	0	0	1	16	27	23	49	14	4	0	134	43	40	13	38
1947	0	0	0	0	0	0	7	10	12	44	6	0	0	79	34	18	8	19
1948	0	0	0	0	0	0	4	9	7	46	6	2	0	74	33	18	4	19
1949	0	0	0	0	0	0	3	10	11	48	10	2	0	84	37	20	4	23
1950	575	0	0	9	6	4	27	42	50	46	8	6	2	775	76	98	34	567

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR SPECIAL INTERNATIONAL EARTHQUAKE CATALOGS FILE (FILE 2)

YEAR	MAGNITUDES													DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	782	0	2	5	2	8	22	46	47	28	4	0	0	946	111	168	29	638
1952	1132	0	1	5	5	14	33	57	57	19	5	2	2	1332	157	199	47	929
1953	484	0	4	1	5	10	30	38	44	25	5	2	0	648	96	51	20	481
1954	414	0	5	8	2	16	18	26	19	19	0	0	0	527	37	55	8	427
1955	246	0	1	9	4	8	16	18	15	21	2	0	0	340	36	18	10	276
1956	277	0	3	9	18	28	24	33	21	13	8	0	0	434	40	36	11	347
1957	594	0	0	15	11	33	25	33	23	34	13	3	0	784	64	46	15	659
1958	777	0	4	12	23	24	39	36	23	8	6	0	2	954	47	59	18	830
1959	1139	0	10	28	27	39	58	45	37	15	5	1	0	1404	128	131	92	1053
1960	882	4	6	20	14	14	31	17	5	15	0	2	0	1010	89	81	94	746
1961	56	2	1	5	3	2	1	0	0	8	3	0	0	81	74	4	3	0
1962	0	0	0	0	0	0	0	0	0	14	0	0	0	14	12	1	1	0
1963	0	0	0	0	0	0	0	0	0	15	1	1	0	17	11	3	3	0
1964	0	0	0	0	0	0	0	0	0	10	2	0	1	13	9	4	0	0
1965	0	0	0	0	0	0	0	0	0	12	3	1	0	16	14	2	0	0
1966	0	0	0	0	0	0	0	0	0	8	2	4	0	14	14	0	0	0
1967	0	0	0	0	0	0	0	0	0	10	2	0	0	12	12	0	0	0
1968	0	0	0	0	0	0	0	0	0	18	8	2	1	29	27	1	1	0
1969	0	0	0	0	0	0	0	0	0	12	5	1	0	18	18	0	0	0
1970	0	0	0	0	0	0	0	0	0	15	8	0	0	23	20	2	1	0
1971	0	0	0	0	0	0	0	0	0	9	3	3	0	15	12	3	0	0
1972	0	0	0	0	0	0	0	0	0	8	8	2	1	19	17	1	1	0
1973	0	0	0	0	0	0	0	0	0	5	7	1	0	13	12	0	1	0
1974	0	0	0	0	0	0	0	0	0	16	2	0	0	18	16	2	0	0
1975	0	0	0	0	0	0	0	0	0	12	7	0	0	19	17	2	0	0
1976	0	0	0	0	0	0	0	0	0	17	3	3	0	23	22	1	0	0
1977	0	0	0	0	0	0	0	0	0	9	5	1	0	15	15	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	19741	6	37	126	120	259	1264	1526	1332	1697	498	192	51	26849	2471	2497	920	20961

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE CALIFORNIA DATA FILES (FILE 3)

YEAR	MAGNITUDES													TOTAL	DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9		0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
1850	31	0	0	0	0	0	0	0	0	0	0	0	0	31	0	0	0	31
1900	1391	0	0	0	0	0	0	0	0	0	0	0	0	1391	0	0	0	1391
1901	129	0	0	0	1	0	1	0	0	0	0	0	0	131	0	0	0	131
1902	95	0	0	1	1	0	2	0	0	0	0	0	0	99	0	0	0	99
1903	69	0	0	1	1	0	2	0	0	0	0	0	0	73	0	0	0	73
1904	88	0	0	1	1	0	2	0	0	0	0	0	0	92	0	0	0	92
1905	96	0	0	2	2	0	0	0	0	0	0	0	0	100	0	0	0	100
1906	614	0	0	2	0	2	0	0	0	0	0	0	0	620	0	0	0	620
1907	106	0	0	1	1	0	0	1	0	0	0	2	0	108	0	0	0	108
1908	92	0	0	2	0	0	0	1	0	0	0	0	0	97	0	0	0	97
1909	56	0	0	0	1	1	0	0	1	0	0	0	0	61	0	0	0	61
1910	176	0	0	0	2	1	1	1	0	0	0	0	0	184	0	0	0	184
1911	117	0	0	2	0	3	2	2	1	0	0	0	0	123	0	0	0	123
1912	75	0	0	0	2	0	0	0	2	0	0	0	0	78	0	0	0	78
1913	60	0	0	3	0	0	1	0	0	0	0	0	0	63	0	0	0	63
1914	85	0	0	1	2	1	0	0	0	0	0	0	0	91	0	0	0	91
1915	188	0	0	3	3	2	1	2	2	1	0	0	0	202	0	0	0	202
1916	129	0	0	5	2	1	4	1	0	0	0	0	0	142	0	0	0	142
1917	199	0	0	5	1	0	1	0	0	0	0	0	0	206	0	0	0	206
1918	170	0	0	2	0	2	0	0	4	0	0	0	0	178	0	0	0	178
1919	151	0	0	1	3	2	0	0	0	0	0	0	0	157	0	0	0	157
1920	177	0	0	0	6	1	0	0	0	0	0	0	0	184	0	0	0	184
1921	81	0	0	3	0	1	0	0	0	0	0	0	0	85	0	0	0	85
1922	93	0	0	0	1	1	0	1	2	1	0	0	0	99	0	0	0	99
1923	84	0	0	1	1	4	1	2	0	2	0	0	0	95	0	0	0	95
1924	71	0	0	1	1	0	0	0	0	0	0	0	0	73	0	0	0	73
1925	101	0	0	1	2	0	0	4	0	0	0	0	0	108	0	0	0	108
1926	122	0	0	0	1	4	3	5	0	0	0	0	0	135	0	0	0	135
1927	167	0	0	0	0	3	4	2	0	1	1	0	0	178	0	0	0	178
1928	29	0	0	3	5	2	0	0	0	0	0	0	0	39	0	0	0	39
1929	71	0	1	2	5	1	1	0	0	0	0	0	0	81	0	0	0	81
1930	91	0	1	13	13	7	0	0	0	0	0	0	0	125	0	0	0	125
1931	98	0	1	24	4	0	3	0	0	0	0	0	0	130	0	0	0	130
1932	98	527	91	43	22	4	1	1	0	2	0	0	0	789	327	0	0	462
1933	87	252	184	213	59	24	3	5	0	0	0	0	0	827	369	0	0	458
1934	167	828	111	80	41	11	1	4	2	2	0	0	0	1247	490	0	0	757
1935	58	895	182	104	33	13	1	2	0	0	0	0	0	1288	598	0	0	690
1936	124	717	95	80	16	6	0	0	0	0	0	0	0	1038	434	0	0	604
1937	80	446	103	63	23	4	1	2	0	0	0	0	0	722	298	0	0	424
1938	24	302	130	70	30	8	6	0	0	0	0	0	0	570	255	0	0	315
1939	133	376	131	71	43	16	6	1	2	0	0	0	0	779	302	0	0	477
1940	42	258	191	120	59	13	8	1	2	0	0	0	0	694	319	0	0	375
1941	125	270	134	91	29	15	6	6	0	0	0	0	0	676	271	0	0	405
1942	103	356	136	123	46	15	4	0	2	0	0	0	0	785	270	0	0	515
1943	158	300	140	77	26	2	6	0	0	0	0	0	0	709	212	0	0	497
1944	90	396	122	46	15	8	0	0	0	0	0	0	0	677	216	0	0	461
1945	55	380	82	47	7	10	2	0	0	0	0	0	0	583	190	0	0	393
1946	47	576	232	78	24	20	2	2	0	0	0	0	0	981	424	0	0	557
1947	44	886	161	84	30	21	2	2	0	0	0	0	0	1230	508	0	0	722
1948	88	800	137	56	32	4	0	1	2	0	0	0	0	1120	396	0	0	724
1949	73	978	225	62	36	7	6	1	0	0	0	0	0	1388	492	0	0	896
1950	26	1616	232	93	44	2	5	0	0	0	0	0	0	2018	469	0	0	1549

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE CALIFORNIA DATA FILES (FILE 3)

YEAR	MAGNITUDES													TOTAL	DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9		0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	27	751	126	50	23	7	4	1	0	0	0	0	0	989	248	0	0	741
1952	32	675	218	286	124	24	15	8	0	0	2	0	0	1384	490	0	0	894
1953	42	1360	212	63	15	7	2	1	0	0	0	0	0	1702	548	0	0	1154
1954	20	1085	248	184	68	34	11	5	5	2	0	0	0	1662	566	0	0	1096
1955	44	967	173	105	41	17	3	0	0	0	0	0	0	1350	341	0	0	1009
1956	41	950	144	100	116	32	8	6	2	0	0	0	0	1399	404	0	0	995
1957	30	1156	169	49	24	9	0	0	0	0	0	0	0	1437	244	0	0	1193
1958	2	848	133	75	35	3	4	0	0	0	0	0	0	1100	223	0	0	877
1959	12	984	191	126	30	7	7	3	0	0	0	0	0	1360	278	0	0	1082
1960	19	820	142	60	13	7	2	1	0	0	0	0	0	1064	198	0	0	866
1961	2	904	161	119	25	12	8	0	0	0	0	0	0	1231	315	0	0	916
1962	0	646	151	45	27	12	2	0	0	0	0	0	0	883	290	0	0	593
1963	0	739	158	92	41	14	4	0	0	0	0	0	0	1048	337	0	0	711
1964	0	502	146	60	43	12	5	1	0	0	0	0	0	769	227	0	0	542
1965	0	614	105	82	45	9	3	0	0	0	0	0	0	858	262	0	0	596
1966	17	766	107	84	42	8	2	3	0	0	0	0	0	1029	196	0	0	833
1967	0	759	110	70	30	3	2	0	0	0	0	0	0	974	305	0	0	669
1968	0	1140	172	106	47	7	3	2	0	0	0	0	0	1477	562	0	0	915
1969	0	3414	152	88	78	33	18	1	0	0	0	0	0	3784	1831	0	0	1953
1970	1	5576	129	70	27	6	0	0	0	0	0	0	0	5809	2743	0	0	3066
1971	0	5453	345	118	54	12	4	1	1	0	0	0	0	5988	2829	0	0	3159
1972	0	11443	143	45	25	5	1	0	0	0	0	0	0	11662	5555	0	0	6107
1973	3	9527	76	26	13	2	1	0	0	0	0	0	0	9648	4034	0	0	5614
1974	0	4170	49	24	3	3	0	0	0	0	0	0	0	4249	3125	0	0	1124
1975	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	3215	1	1	1	0	0	0	0	0	0	0	0	3218	3108	0	0	110
1977	37	6679	29	6	3	0	0	0	0	0	0	0	0	6754	6585	0	0	169
1978	20	2601	9	3	0	0	0	0	0	0	0	0	0	2633	2541	0	0	92
1979	27	3227	8	4	1	0	1	0	0	0	0	0	0	3268	3194	0	0	74
1980	40	5940	36	14	5	2	1	0	0	1	0	0	0	6039	5574	0	0	465
1981	9	9590	46	10	1	0	0	0	0	0	0	0	0	9656	8974	5	0	677
1982	15	8885	41	9	4	2	1	0	0	0	0	0	0	8957	8201	1	0	755
1983	456	9247	81	7	0	0	0	0	0	0	0	0	0	9791	8316	15	0	1460
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7826	115792	6833	3863	1682	531	200	84	30	12	3	2	0	136858	79484	21	0	57353

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE UNITED STATES (EXCLUDING ALASKA AND HAWAII) DATA FILE (FILE 4)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	41	1	0	0	0	0	0	0	0	0	0	0	0	42	0	0	0	42
1750	187	0	0	0	0	0	0	0	0	0	0	0	0	187	0	0	0	187
1800	124	0	0	0	0	0	0	0	0	0	0	0	0	124	0	0	0	124
1850	534	7	10	9	9	0	1	2	0	3	1	2	0	578	0	0	0	578
1900	3028	61	59	51	29	17	5	5	0	0	0	0	0	3255	0	0	0	3255
1901	232	1	3	5	1	1	0	0	0	0	0	0	0	243	0	0	0	243
1902	127	1	4	3	4	0	0	0	0	0	0	0	0	139	0	0	0	139
1903	117	7	4	4	6	1	0	0	0	0	0	0	0	139	0	0	0	139
1904	121	1	1	2	0	0	0	0	0	0	0	0	0	125	0	0	0	125
1905	123	1	1	2	2	2	0	0	0	0	0	0	0	131	0	0	0	131
1906	746	13	12	5	2	0	1	0	0	0	0	1	0	780	0	0	0	780
1907	158	4	5	2	0	0	0	0	0	0	0	0	0	169	0	0	0	169
1908	135	1	3	6	0	0	0	0	0	0	0	0	0	145	0	0	0	145
1909	99	2	3	7	4	4	0	0	0	0	0	0	0	119	0	0	0	119
1910	164	0	3	1	0	0	0	0	1	0	0	0	0	169	0	0	0	169
1911	91	1	2	2	3	0	0	0	1	0	0	0	0	100	0	0	0	100
1912	73	0	1	0	2	0	0	0	0	0	0	0	0	76	0	0	0	76
1913	81	0	7	1	0	1	0	0	0	0	0	0	0	90	0	0	0	90
1914	113	1	2	2	0	1	1	2	1	0	0	0	0	123	0	0	0	123
1915	204	6	7	4	2	0	0	0	0	0	1	0	0	224	0	0	0	224
1916	194	7	5	2	1	2	3	1	0	0	0	0	0	215	0	0	0	215
1917	199	6	5	5	2	3	0	0	1	0	0	0	0	221	0	0	0	221
1918	179	2	7	6	4	0	0	0	0	0	0	0	0	198	0	0	0	198
1919	131	1	15	5	0	1	0	0	0	0	0	0	0	153	0	0	0	153
1920	166	1	7	6	0	0	0	0	0	0	0	0	0	180	0	0	0	180
1921	148	4	11	5	0	0	0	0	0	0	0	0	0	168	0	0	0	168
1922	105	2	1	10	4	1	0	0	0	0	0	0	0	123	0	0	0	123
1923	104	1	10	5	1	1	0	0	0	0	0	0	0	122	0	0	0	122
1924	88	1	3	5	2	0	1	1	0	0	0	0	0	101	1	0	0	100
1925	158	6	9	5	6	1	0	0	0	1	0	0	0	186	1	0	0	185
1926	211	3	8	10	0	0	0	1	0	0	0	0	0	233	0	0	0	233
1927	246	2	13	12	2	1	0	0	0	1	0	0	0	277	0	0	0	277
1928	277	5	14	5	3	1	0	1	0	0	0	0	0	306	1	0	0	305
1929	259	3	10	10	2	2	0	0	0	0	0	0	0	286	1	0	0	285
1930	417	16	19	6	3	6	0	0	0	0	0	0	0	467	0	0	0	467
1931	285	20	12	5	4	4	2	0	0	0	0	0	0	332	3	0	0	329
1932	201	9	2	10	9	6	2	1	0	1	0	0	0	241	0	0	0	241
1933	186	6	13	22	8	10	4	2	0	0	0	0	0	251	2	0	0	249
1934	133	418	66	69	45	15	5	3	2	1	0	0	0	757	0	0	0	757
1935	175	464	96	57	24	9	1	2	0	0	0	0	0	828	0	0	0	828
1936	147	366	65	47	16	4	3	1	0	0	0	0	0	649	1	0	0	648
1937	112	241	63	43	15	6	1	1	0	0	0	0	0	482	2	0	0	480
1938	154	192	83	53	21	8	4	0	0	0	0	0	0	515	7	0	0	508
1939	120	236	77	52	32	7	6	0	0	0	0	0	0	530	2	0	0	528
1940	138	150	109	61	38	8	8	2	0	1	0	0	0	515	2	0	0	513
1941	95	158	77	53	17	8	6	6	0	0	0	0	0	420	0	0	0	420
1942	100	197	75	69	25	7	3	0	1	0	0	0	0	477	0	0	0	477
1943	80	162	76	45	15	1	3	0	0	0	0	0	0	382	3	0	0	379
1944	173	211	69	37	9	8	4	0	0	0	0	0	0	511	2	0	0	509
1945	230	199	49	30	5	6	1	3	0	0	0	0	0	523	1	0	0	522
1946	99	297	120	44	14	11	2	1	0	1	0	0	0	589	0	0	0	589
1947	88	446	85	54	21	10	1	1	0	0	0	0	0	706	1	0	0	705
1948	136	416	79	34	20	3	1	1	1	0	0	0	0	691	2	0	0	689
1949	112	499	114	35	21	4	5	1	0	1	0	0	0	792	1	0	0	791
1950	113	810	126	56	28	1	4	0	0	0	0	0	0	1138	0	0	0	1138

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE UNITED STATES (EXCLUDING ALASKA AND HAWAII) DATA FILE (FILE 4)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	129	385	69	30	15	6	3	2	0	0	0	0	0	639	4	0	0	635
1952	205	311	78	153	66	14	10	5	0	0	1	0	0	843	3	0	0	840
1953	154	686	130	37	12	4	2	0	0	0	0	0	0	1025	1	0	0	1024
1954	166	551	142	146	56	25	9	5	4	1	0	0	0	1105	5	0	0	1100
1955	145	496	104	92	33	13	2	0	1	0	0	0	0	886	5	0	0	881
1956	135	470	90	81	114	24	5	4	1	0	0	0	0	924	5	0	0	919
1957	114	376	96	39	19	8	0	0	0	0	0	0	0	652	14	0	0	638
1958	120	396	85	52	22	3	2	0	0	0	0	0	0	680	10	0	0	670
1959	416	488	109	59	21	8	5	4	2	1	0	0	0	1113	5	0	0	1108
1960	345	104	34	26	6	4	4	1	0	0	0	0	0	524	15	0	0	509
1961	334	225	57	39	18	11	5	0	0	0	0	0	0	689	103	0	0	586
1962	176	265	60	32	16	7	1	0	0	0	0	0	0	557	51	0	0	506
1963	372	256	86	73	32	7	1	0	0	0	0	0	0	827	409	0	0	418
1964	253	218	86	81	46	14	4	3	0	0	0	0	0	705	370	0	0	335
1965	204	273	77	88	87	25	5	0	1	2	0	0	0	762	402	0	0	360
1966	357	293	89	109	76	19	3	2	0	0	0	0	0	948	632	0	0	316
1967	210	70	78	106	45	13	2	0	0	0	0	0	0	524	359	0	0	165
1968	222	46	94	122	47	14	5	3	0	0	0	0	0	553	408	0	0	145
1969	122	36	41	149	119	42	12	2	1	0	0	0	0	524	377	1	0	146
1970	200	27	33	81	49	17	5	1	1	0	0	0	0	414	236	0	0	178
1971	403	48	39	76	54	17	6	1	0	0	0	0	0	644	474	0	0	170
1972	243	24	27	44	56	12	4	0	0	0	0	0	0	410	282	0	0	128
1973	409	32	35	56	59	18	8	1	0	0	0	0	0	618	530	0	0	88
1974	192	53	38	82	52	12	6	0	0	0	0	0	0	435	382	0	0	53
1975	13	56	8	9	4	1	0	0	0	0	0	0	0	91	44	0	0	47
1976	16	48	7	3	2	1	0	0	0	0	0	0	0	77	44	0	0	33
1977	15	51	1	2	1	1	0	0	0	0	0	0	0	71	49	0	0	22
1978	20	96	8	0	1	0	0	0	0	0	0	0	0	125	102	0	0	23
1979	6	84	6	2	0	0	0	0	0	0	0	0	0	98	87	0	0	11
1980	15	95	6	0	0	1	0	0	0	0	0	0	0	117	92	0	0	25
1981	2	62	5	2	0	0	0	0	0	0	0	0	0	71	65	0	0	6
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	17970	12286	3538	2950	1609	523	187	72	19	14	3	3	0	39174	5598	1	0	33575

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE ALASKAN DATA FILES (FILE 5)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1850	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1907	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1908	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1909	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1910	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1911	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1912	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1913	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1916	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1917	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1918	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1920	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1921	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1922	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1924	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1925	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1927	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1928	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE ALASKAN DATA FILES (FILE 5)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	453	181	284	444	299	148	48	6	0	0	0	0	0	1863	1795	66	0	2
1965	3	0	24	50	45	24	7	0	2	0	0	0	0	155	137	18	0	0
1966	4	0	16	46	35	15	7	0	0	0	0	0	0	123	104	19	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	357	40	39	54	24	6	3	2	0	0	0	0	0	525	401	80	0	44
1970	118	1748	248	122	44	15	3	1	0	0	0	0	0	2299	1687	553	0	59
1971	590	2421	337	180	59	20	5	2	0	0	0	0	0	3614	2576	900	0	138
1972	516	1812	282	103	55	15	6	1	0	0	0	0	0	2790	1756	730	0	304
1973	287	248	61	21	22	8	1	0	0	0	0	0	0	648	393	159	0	96
1974	327	1	0	0	0	0	0	0	0	0	0	0	0	328	279	48	0	1
1975	302	0	0	0	0	0	0	0	0	0	0	0	0	302	236	66	0	0
1976	276	0	0	0	0	0	0	0	0	0	0	0	0	276	217	59	0	0
1977	73	61	3	0	0	0	0	0	0	0	0	0	0	137	115	18	0	4
1978	140	350	16	6	1	0	0	0	0	0	0	0	0	513	395	94	0	24
1979	218	531	41	14	3	0	0	0	0	0	0	0	0	807	666	133	0	8
1980	26	415	5	1	1	2	0	0	0	0	0	0	0	450	341	91	0	18
1981	11	395	14	12	4	2	0	0	0	0	0	0	0	438	347	87	0	4
1982	1	468	30	31	10	7	3	2	1	0	0	0	0	553	442	87	0	24
1983	1	499	29	16	10	7	2	1	0	0	0	0	0	565	444	105	0	16
1984	0	290	5	2	2	0	0	0	0	0	0	0	0	299	256	37	0	6
TOTAL	3703	9460	1434	1102	614	269	85	15	3	0	0	0	0	16685	12587	3350	0	748

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE HAWAIIAN DATA FILES (FILE 6)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1850	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1907	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1908	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1909	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1910	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1911	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1912	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1913	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1916	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1917	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1918	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1920	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1921	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1922	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1924	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1925	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1927	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1928	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE HAWAIIAN DATA FILES (FILE 6)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	11	1	1	0	0	0	0	0	0	0	0	0	13	13	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	6	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0
1964	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0
1965	0	0	3	0	1	0	0	0	0	0	0	0	0	4	4	0	0	0
1966	0	0	7	0	0	0	0	0	0	0	0	0	0	7	6	0	0	1
1967	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	1875	2424	22	10	1	0	0	0	0	0	0	0	0	4332	4165	8	0	159
1971	2485	4346	42	15	7	0	0	0	0	0	0	0	0	6895	6622	7	0	266
1972	860	2276	15	8	2	2	0	0	0	0	0	0	0	3163	3135	1	0	27
1973	985	2017	26	10	2	1	0	0	0	0	0	0	0	3041	2956	3	0	82
1974	1554	3329	36	18	6	0	2	0	0	0	0	0	0	4945	4866	4	0	75
1975	999	5246	115	33	11	2	0	0	0	0	0	0	0	6406	6268	4	0	134
1976	239	2030	61	11	6	1	0	0	0	0	0	0	0	2348	2320	0	0	28
1977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	8997	21679	334	106	36	6	3	0	0	0	0	0	0	31161	30362	27	0	772

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE CANADIAN DATA FILE (FILE 7)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	0	6	10	3	0	3	5	2	0	0	1	0	0	30	0	0	0	30
1750	1	10	6	6	0	4	1	1	0	1	0	0	0	30	0	0	0	30
1800	0	10	13	5	0	4	1	3	0	1	0	0	0	37	0	0	0	37
1850	2	38	29	13	0	6	5	0	0	0	0	0	0	93	0	0	0	93
1900	11	203	73	43	2	27	13	1	1	2	2	1	1	380	0	0	0	380
1901	0	0	0	0	0	1	0	0	0	0	0	1	0	2	1	0	0	1
1902	0	1	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	3
1903	1	0	2	3	0	0	0	0	0	0	0	0	0	6	0	0	0	6
1904	0	0	0	1	0	1	0	1	0	0	0	0	0	3	0	0	0	3
1905	0	0	1	4	0	0	2	0	0	0	0	0	0	7	0	0	0	7
1906	0	3	2	8	0	1	1	0	0	0	0	0	0	15	0	0	0	15
1907	1	1	5	1	0	1	0	0	0	0	0	0	0	9	0	0	0	9
1908	0	2	3	3	0	2	1	0	0	1	0	0	0	12	0	0	0	12
1909	2	3	4	3	0	1	5	2	0	0	0	0	0	20	0	0	0	20
1910	2	4	3	4	0	2	0	0	1	0	0	0	0	16	0	0	0	16
1911	1	2	0	2	0	0	0	0	0	0	0	0	0	5	0	0	0	5
1912	2	1	2	1	0	1	0	0	1	1	0	0	0	9	0	0	0	9
1913	0	2	2	6	0	0	0	0	0	0	0	0	0	10	0	0	0	10
1914	0	1	1	4	0	0	2	0	2	0	0	0	0	10	0	0	0	10
1915	1	1	1	12	0	2	1	0	1	0	1	0	0	20	0	0	0	20
1916	0	1	2	11	0	6	3	0	0	0	0	0	0	23	0	0	0	23
1917	1	2	1	8	0	3	0	1	2	0	0	0	0	18	0	0	0	18
1918	0	0	3	4	0	0	1	1	1	1	0	0	0	11	0	0	0	11
1919	1	1	3	0	0	1	3	1	0	0	0	0	0	10	0	0	0	10
1920	3	0	4	4	0	2	1	2	1	0	0	0	0	17	1	0	0	16
1921	1	1	4	3	0	2	1	0	1	0	0	0	0	13	0	0	0	13
1922	0	2	1	2	0	1	1	1	0	1	0	0	0	9	0	0	0	9
1923	2	2	0	3	0	5	2	0	0	1	0	0	0	15	0	0	0	15
1924	1	0	1	2	1	1	1	1	0	0	0	0	0	8	0	0	0	8
1925	0	17	14	12	0	4	1	1	1	1	0	0	0	51	0	0	0	51
1926	0	14	9	7	0	4	2	3	1	0	0	0	0	40	0	0	0	40
1927	0	13	7	5	0	5	1	1	0	1	0	0	0	33	0	0	0	33
1928	0	20	12	5	0	4	1	1	0	0	0	0	0	43	0	0	0	43
1929	0	15	3	6	2	2	3	3	0	2	0	0	0	36	0	0	0	36
1930	0	30	7	5	3	5	3	0	0	0	0	0	0	53	0	0	0	53
1931	0	10	4	3	1	4	3	0	0	0	0	0	0	25	0	0	0	25
1932	0	9	3	3	0	3	3	2	0	0	0	0	0	23	0	0	0	23
1933	0	9	3	7	0	3	4	0	0	1	0	0	0	27	1	0	0	26
1934	0	8	4	11	1	4	5	1	2	0	0	0	0	36	0	0	0	36
1935	0	14	2	3	5	6	4	5	0	0	0	0	0	39	0	0	0	39
1936	0	7	2	6	4	5	3	3	0	0	0	0	0	30	0	0	0	30
1937	1	12	5	2	0	5	6	0	0	0	0	0	0	31	0	0	0	31
1938	0	22	3	7	4	2	3	2	0	0	0	0	0	43	0	0	0	43
1939	0	20	4	4	1	3	2	1	3	0	0	0	0	38	0	0	0	38
1940	0	17	5	7	5	3	5	3	1	0	0	0	0	46	3	0	0	43
1941	0	16	4	5	2	8	2	8	1	0	0	0	0	46	0	0	0	46
1942	0	10	3	8	5	0	4	2	0	0	0	0	0	32	1	0	0	31
1943	1	11	4	3	1	5	0	0	0	0	0	0	0	25	0	0	0	25
1944	0	16	5	13	8	7	5	2	1	0	0	0	0	57	1	0	0	56
1945	0	7	1	4	8	7	5	4	1	0	0	0	0	37	0	0	0	37
1946	0	13	2	2	3	4	1	0	2	2	0	0	0	29	0	0	0	29
1947	0	4	2	6	4	4	1	3	0	0	0	0	0	24	0	0	0	24
1948	0	7	5	6	3	3	3	1	1	0	0	0	0	29	0	0	0	29
1949	0	5	4	12	18	9	5	3	0	1	0	1	0	58	0	0	0	58
1950	0	5	8	29	18	7	5	0	0	0	0	0	0	72	0	0	0	72

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE CANADIAN DATA FILE (FILE 7)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	0	41	16	17	10	5	6	2	0	0	0	0	0	97	0	0	0	97
1952	11	74	26	19	8	8	4	0	1	0	0	0	0	151	3	0	0	148
1953	0	104	27	9	8	6	1	1	1	0	0	0	0	157	1	0	0	156
1954	0	76	30	20	8	10	1	0	2	0	0	0	0	147	0	0	0	147
1955	2	136	17	22	10	2	0	0	2	0	0	0	0	191	2	0	0	189
1956	0	182	29	23	11	6	2	3	3	0	0	0	0	259	4	0	0	255
1957	0	152	23	23	9	7	6	3	0	0	0	0	0	223	2	0	0	221
1958	1	153	37	35	23	9	1	2	0	0	1	0	0	262	1	0	0	261
1959	0	136	34	56	31	13	6	4	2	1	0	0	0	283	1	0	0	282
1960	3	107	25	39	42	7	3	4	1	0	0	0	0	231	26	0	0	205
1961	5	60	7	18	3	12	3	0	0	0	0	0	0	108	1	0	0	107
1962	0	55	14	23	15	5	3	0	0	0	0	0	0	115	0	0	0	115
1963	3	86	35	58	16	8	1	1	0	0	0	0	0	208	21	1	0	186
1964	37	74	41	57	11	5	2	0	0	0	0	1	0	228	3	0	0	225
1965	5	54	48	70	26	5	1	0	1	0	0	0	0	210	16	0	0	194
1966	1	115	81	75	29	5	0	0	0	0	0	0	0	306	19	0	0	287
1967	5	178	61	47	10	3	0	0	0	0	0	0	0	304	8	0	0	296
1968	90	100	40	28	7	3	0	0	0	0	0	0	0	268	268	0	0	0
1969	37	96	18	17	6	0	0	0	0	0	0	0	0	274	272	0	0	2
1970	12	78	21	18	14	1	0	0	0	1	0	0	0	245	245	0	0	0
1971	43	119	40	31	11	7	3	2	0	0	0	0	0	356	355	0	0	1
1972	90	80	27	26	12	4	3	1	0	0	0	0	0	243	243	0	0	0
1973	99	48	12	18	12	1	0	0	0	0	0	0	0	190	189	0	0	1
1974	72	65	12	21	11	0	0	0	0	0	0	0	0	181	181	0	0	0
1975	73	166	35	30	12	5	1	0	0	0	0	0	0	322	322	0	0	0
1976	14	258	48	31	20	8	0	1	1	0	0	0	0	481	481	0	0	0
1977	18	322	28	10	13	0	0	0	0	0	0	0	0	491	491	0	0	0
1978	42	472	38	35	13	5	3	1	0	0	0	0	0	709	709	0	0	0
1979	31	1598	115	53	23	14	0	0	0	1	0	0	0	1935	1933	2	0	0
1980	86	735	45	23	15	4	0	0	1	0	0	0	0	909	904	1	0	4
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	15	6548	1331	1294	538	361	180	91	40	20	5	4	1	11928	6709	4	0	5215

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE EUROPEAN DATA FILE (FILE 8)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	1523	0	0	0	0	0	0	0	0	0	0	0	0	1523	9	27	0	1487
1750	481	0	0	2	2	0	0	0	0	0	0	0	0	485	6	4	0	475
1800	707	0	0	5	2	1	1	0	0	0	0	0	0	716	10	3	0	703
1850	1019	12	26	10	5	0	0	0	0	0	0	0	0	1072	54	8	0	1010
1900	2710	258	53	27	11	6	2	0	0	0	0	0	0	3067	339	33	1	2694
1901	95	46	17	32	22	16	7	1	1	2	0	0	0	239	140	1	0	98
1902	38	20	15	31	27	8	8	1	2	0	0	0	0	150	105	5	0	40
1903	95	17	14	32	23	14	13	6	0	1	1	0	0	216	116	7	0	93
1904	83	46	27	47	47	33	14	6	4	2	4	0	0	313	228	5	1	79
1905	64	44	44	72	55	28	23	5	4	4	1	0	0	344	266	1	0	77
1906	190	25	41	59	31	19	4	6	1	0	0	0	0	376	181	4	0	191
1907	83	49	30	62	43	12	8	1	0	0	0	0	0	288	184	5	1	98
1908	82	28	35	83	54	21	1	2	5	2	0	0	0	313	184	7	0	122
1909	119	59	25	78	60	29	19	9	1	0	0	0	0	399	240	2	0	157
1910	82	31	14	34	35	19	7	3	5	2	0	0	0	232	137	7	0	88
1911	41	41	32	43	25	23	11	10	3	2	0	0	0	231	171	11	0	49
1912	14	33	23	42	49	35	9	8	4	3	2	0	0	222	193	7	0	22
1913	42	11	15	36	21	21	11	2	2	1	0	0	0	162	109	7	0	46
1914	48	22	22	39	51	18	7	4	2	0	0	0	0	213	164	5	0	44
1915	78	17	10	78	105	24	13	7	5	0	0	0	0	337	265	3	0	69
1916	32	15	21	57	37	29	11	2	0	1	0	0	0	205	181	2	0	22
1917	525	13	25	46	50	22	15	0	0	0	0	0	0	696	169	3	0	524
1918	230	15	9	48	57	18	17	0	1	2	0	0	0	397	159	8	0	230
1919	183	19	4	52	47	31	11	10	0	2	0	0	0	359	177	3	0	179
1920	147	8	14	53	54	47	13	7	0	0	0	0	0	343	193	2	0	148
1921	204	11	35	74	58	30	13	1	0	0	0	0	0	426	215	0	0	211
1922	93	9	32	57	53	22	24	5	2	0	0	0	0	297	189	7	0	101
1923	142	14	17	67	58	30	11	7	4	0	0	0	0	350	202	7	0	141
1924	217	9	10	40	56	38	9	0	1	0	0	0	0	380	178	0	0	202
1925	131	15	5	56	70	45	14	1	3	0	0	0	0	340	204	3	0	133
1926	120	19	20	61	81	47	30	8	3	5	3	0	0	397	257	25	0	115
1927	288	18	42	93	86	25	9	11	2	3	0	0	0	577	265	8	1	303
1928	604	18	11	69	84	42	12	5	7	2	0	0	0	854	258	7	0	589
1929	236	6	18	48	65	35	3	5	2	0	0	0	0	418	171	14	0	233
1930	271	11	22	63	71	34	18	7	6	2	0	0	0	505	238	12	0	255
1931	234	12	34	86	65	23	7	11	7	1	0	0	0	480	236	6	0	238
1932	65	13	9	28	70	36	11	7	4	2	0	0	0	245	170	7	0	68
1933	117	10	5	39	63	23	5	7	1	0	0	0	0	270	158	4	0	108
1934	98	17	14	33	42	19	14	6	2	0	0	0	0	245	139	10	0	96
1935	112	9	15	27	43	25	12	11	3	7	0	0	0	264	142	17	0	105
1936	123	11	16	39	50	31	13	3	0	0	0	0	0	286	162	6	0	118
1937	23	7	18	30	27	18	3	2	1	0	0	0	0	129	90	8	0	31
1938	12	8	11	36	42	26	19	4	2	2	0	0	0	162	138	11	0	13
1939	26	4	10	27	43	30	8	2	3	0	0	2	0	155	131	6	0	18
1940	26	3	17	38	60	34	12	7	2	3	0	0	0	202	142	45	0	15
1941	23	4	9	20	48	31	9	10	7	0	1	0	0	162	127	22	0	13
1942	22	9	12	19	31	20	17	11	0	2	0	0	0	143	109	19	0	15
1943	38	28	12	27	39	35	14	6	4	1	1	0	0	205	162	19	0	24
1944	8	22	11	6	18	24	21	4	2	2	0	0	0	118	99	14	0	5
1945	13	16	4	19	19	19	7	6	3	0	0	0	0	106	80	15	0	11
1946	15	5	0	20	23	24	17	3	0	0	0	0	0	107	82	12	0	13
1947	122	9	9	33	34	36	13	5	2	1	0	0	0	264	139	16	0	109
1948	58	5	9	31	68	46	14	8	6	4	0	0	0	249	186	27	0	36
1949	59	9	23	40	66	26	5	1	4	0	0	0	0	233	178	5	0	50
1950	51	11	15	32	48	16	5	0	0	0	0	0	0	178	121	14	0	43

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE EUROPEAN DATA FILE (FILE 8)

YEAR	MAGNITUDES													TOTAL	DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9		0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	62	5	14	42	45	26	8	2	1	0	0	0	0	205	135	8	0	62
1952	48	9	16	65	77	26	9	6	1	1	0	0	0	258	202	13	0	43
1953	110	5	6	130	185	87	13	17	8	4	1	0	0	566	414	16	0	136
1954	100	6	15	100	138	56	19	7	4	3	0	0	0	448	322	22	3	101
1955	78	16	12	80	60	29	13	6	2	0	0	0	0	296	188	9	2	97
1956	107	14	13	30	31	19	5	1	1	1	0	0	0	222	79	8	0	135
1957	147	16	24	42	27	16	6	0	3	2	0	0	0	283	82	1	0	200
1958	96	21	14	43	19	15	3	2	0	0	0	0	0	213	67	5	0	141
1959	145	8	14	72	28	16	3	2	1	0	0	0	0	289	78	10	0	201
1960	62	12	55	63	37	8	3	1	0	0	0	0	0	241	83	10	0	148
1961	47	13	41	31	28	7	1	2	0	0	0	0	0	170	63	10	0	97
1962	76	25	47	109	35	17	7	5	2	0	0	0	0	323	120	13	0	190
1963	131	70	65	47	29	11	4	3	0	0	0	0	0	360	110	5	0	245
1964	75	84	45	52	37	7	6	0	1	0	0	0	0	307	124	9	0	174
1965	74	200	129	70	56	9	9	3	1	0	0	0	0	551	174	9	0	368
1966	93	481	156	80	94	16	3	1	0	0	0	0	0	924	237	19	0	668
1967	79	393	138	95	96	17	1	1	2	1	0	0	0	823	275	11	0	537
1968	108	299	386	97	73	13	11	0	0	1	0	0	0	988	219	14	0	755
1969	124	159	234	60	84	15	8	5	1	0	0	0	0	690	232	5	0	453
1970	213	285	200	165	83	17	5	1	0	1	0	0	0	970	299	12	0	659
1971	84	264	86	35	9	1	0	0	0	0	0	0	0	479	158	0	0	321
1972	17	292	64	45	13	3	0	0	0	0	0	0	0	434	151	0	0	283
1973	19	209	33	14	3	0	0	0	0	0	0	0	0	278	117	0	0	161
1974	5	221	65	16	3	0	0	0	0	0	0	0	0	310	111	0	0	199
1975	5	211	37	8	2	2	0	0	0	0	0	0	0	265	96	0	0	169
1976	1	315	90	52	11	3	2	2	1	0	0	0	0	477	171	0	0	306
1977	1	103	8	1	0	0	0	0	0	0	0	0	0	113	92	0	0	21
1978	1	76	4	4	2	0	1	0	0	0	0	0	0	88	54	0	0	34
1979	0	127	3	2	0	0	0	0	0	0	0	0	0	132	117	0	0	15
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	14370	5111	2995	3976	3799	1800	734	321	152	75	14	2	0	33349	13519	745	9	19076

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE USSR DATA FILE (FILE 9)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	0	0	9	6	16	17	25	26	19	10	2	0	0	130	113	17	0	0
1750	0	1	1	1	5	1	2	3	2	3	5	2	0	26	21	4	1	0
1800	0	0	9	9	10	10	4	6	5	2	3	1	0	59	57	2	0	0
1850	0	7	28	24	19	14	11	14	11	3	3	2	0	136	124	12	0	0
1900	0	20	49	79	45	43	49	27	19	7	5	3	0	346	336	10	0	0
1901	0	2	2	5	4	0	1	0	0	0	2	0	0	16	16	0	0	0
1902	0	2	5	2	5	6	8	3	5	3	1	2	0	42	38	3	1	0
1903	0	1	1	7	4	4	3	5	2	0	0	0	0	27	25	2	0	0
1904	0	0	3	3	2	5	4	4	1	1	3	0	0	26	26	0	0	0
1905	0	1	5	3	1	2	1	7	4	2	2	1	0	29	27	1	1	0
1906	0	1	4	4	2	2	5	1	1	1	1	0	0	22	19	2	1	0
1907	0	2	3	3	2	6	4	3	6	3	1	0	0	33	27	5	1	0
1908	0	1	1	5	9	4	0	0	5	1	1	0	0	27	22	5	0	0
1909	0	0	6	8	3	1	1	1	2	0	0	1	0	23	21	2	0	0
1910	0	1	2	5	3	3	0	0	0	0	0	0	0	14	14	0	0	0
1911	0	3	3	3	2	2	0	4	4	2	2	1	0	26	21	4	1	0
1912	0	3	8	7	4	10	5	5	5	1	0	0	0	48	40	7	1	0
1913	0	3	8	3	4	6	5	2	0	1	1	0	0	33	32	1	0	0
1914	0	4	3	2	9	7	2	7	2	0	0	0	0	36	35	0	1	0
1915	0	0	1	4	5	3	3	5	5	2	0	1	0	29	26	2	1	0
1916	0	0	4	6	6	5	2	4	0	1	1	0	0	29	28	1	0	0
1917	0	1	5	3	6	4	3	1	2	1	1	1	0	28	25	2	1	0
1918	0	0	1	1	1	1	1	4	2	1	2	1	0	15	11	1	3	0
1919	0	1	0	0	1	3	2	2	1	0	0	0	0	10	8	2	0	0
1920	0	0	1	2	1	0	2	4	1	1	0	0	0	12	9	1	2	0
1921	0	0	1	0	0	1	1	5	4	0	1	0	0	13	10	3	0	0
1922	0	0	0	3	0	0	0	1	5	3	1	0	0	13	8	4	1	0
1923	0	0	0	7	5	4	6	9	0	2	1	0	1	35	35	0	0	0
1924	0	2	0	3	4	8	6	5	7	3	1	0	0	39	31	5	3	0
1925	0	0	1	0	0	6	8	3	7	1	0	0	0	26	21	5	0	0
1926	0	9	2	7	7	8	9	3	1	0	0	0	0	46	44	1	1	0
1927	0	3	12	9	12	14	9	10	8	2	0	0	0	79	74	4	1	0
1928	0	1	6	6	12	12	6	13	4	1	0	0	0	61	49	7	5	0
1929	0	2	11	5	11	8	7	9	3	3	1	0	0	60	50	8	2	0
1930	0	5	1	7	2	10	5	6	3	2	0	0	0	41	32	7	2	0
1931	0	1	14	11	9	12	14	10	4	1	1	0	0	77	66	8	3	0
1932	0	0	4	8	10	8	4	5	1	2	0	0	0	42	36	3	3	0
1933	0	2	2	2	5	5	14	6	7	1	0	0	0	44	33	6	5	0
1934	0	1	3	6	4	6	8	6	5	1	0	0	0	40	32	8	0	0
1935	0	8	4	6	5	11	16	13	1	0	1	0	0	65	51	11	3	0
1936	0	1	4	8	6	4	6	4	3	2	0	0	0	38	32	5	1	0
1937	0	9	6	9	6	1	8	10	5	1	1	0	0	56	48	6	2	0
1938	0	1	4	8	9	7	4	10	5	1	0	0	0	49	39	8	2	0
1939	0	5	2	4	7	9	9	7	2	2	0	1	0	48	41	6	1	0
1940	0	0	5	7	3	4	16	10	4	2	1	0	0	52	33	16	3	0
1941	0	1	4	5	2	4	9	5	3	0	0	0	0	33	24	9	0	0
1942	0	0	1	2	3	8	7	2	3	4	0	0	0	30	22	7	1	0
1943	0	0	0	1	1	6	3	8	4	1	1	0	0	25	15	9	1	0
1944	0	1	0	1	2	10	2	5	2	0	0	0	0	23	19	3	1	0
1945	0	1	2	2	1	4	3	5	2	2	0	0	0	22	16	6	0	0
1946	0	3	2	5	6	6	4	6	2	5	1	0	0	40	33	5	2	0
1947	0	2	7	8	6	8	7	7	5	2	0	0	0	52	44	8	0	0
1948	0	2	4	10	10	8	2	11	1	2	0	0	0	50	47	3	0	0
1949	0	0	6	9	7	16	7	4	2	5	1	0	0	57	49	7	1	0
1950	5	2	5	7	7	9	5	3	1	1	1	0	0	46	34	7	2	3

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE USSR DATA FILE (FILE 9)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	6	0	2	2	8	9	8	8	5	1	0	0	0	49	35	7	2	5
1952	0	1	4	9	13	7	5	41	18	3	0	1	1	103	95	7	1	0
1953	0	3	7	14	15	11	7	26	11	4	0	0	0	98	91	5	2	0
1954	0	1	2	9	10	12	2	15	6	1	0	0	0	58	49	7	2	0
1955	0	1	0	11	10	9	6	8	6	3	0	0	0	54	44	9	1	0
1956	0	0	11	8	15	14	8	7	6	1	1	0	0	71	60	6	1	4
1957	5	1	6	16	22	11	13	8	8	1	1	1	0	93	69	14	3	7
1958	3	4	11	9	22	8	19	16	7	2	0	1	0	102	82	16	1	3
1959	2	3	8	8	13	15	10	10	6	2	1	0	0	78	64	9	3	2
1960	6	0	8	10	12	9	7	10	3	3	0	0	0	68	45	15	2	6
1961	0	167	83	12	33	8	10	16	7	4	0	0	0	340	320	20	0	0
1962	65	3254	344	176	88	84	26	22	6	3	0	0	0	4068	1515	391	11	2151
1963	28	3586	469	256	102	147	61	48	8	5	2	2	0	4714	1615	411	13	2675
1964	18	3513	440	248	102	73	20	27	20	3	0	0	0	4464	1447	431	16	2570
1965	43	3780	372	186	66	62	34	13	2	3	2	0	0	4563	1646	527	28	2362
1966	96	5089	314	120	64	53	20	12	4	1	0	0	0	5773	1922	753	19	3079
1967	39	3154	350	126	64	74	31	20	4	5	2	0	0	3869	1385	946	17	1521
1968	54	2823	328	157	85	62	23	10	6	5	0	0	0	3553	1676	516	13	1348
1969	77	2476	355	162	149	88	46	29	27	6	4	2	0	3421	1233	390	24	1774
1970	79	3296	392	207	112	62	41	15	11	3	0	0	0	4218	1393	413	31	2381
1971	75	3351	427	170	109	83	46	22	15	7	3	0	0	4308	1603	892	30	1783
1972	97	3258	374	160	95	56	22	27	10	1	0	0	0	4100	1178	1008	41	1873
1973	100	3630	440	184	119	113	45	44	11	1	7	0	0	4694	2203	887	42	1562
1974	87	3858	447	199	80	95	54	17	10	7	0	0	0	4854	1514	1010	22	2308
1975	118	4528	413	206	118	64	29	27	17	3	0	0	0	5523	2040	1072	16	2395
1976	92	4364	436	219	127	114	41	29	11	8	0	0	0	5441	1523	1005	18	2895
1977	88	3974	313	177	57	64	27	24	3	3	0	0	0	4730	1343	963	21	2403
1978	228	4623	495	250	82	65	24	27	8	6	3	1	0	5812	2034	1055	20	2703
1979	0	1688	167	47	0	13	2	2	0	0	0	0	0	1919	353	979	0	587
1980	2	1865	138	44	0	15	3	0	0	0	0	0	0	2067	304	1128	0	635
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1413	66407	7431	3763	2123	1876	1038	919	464	193	75	25	2	85729	31070	15163	461	39035

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE PEOPLE'S REPUBLIC OF CHINA, NEW ZEALAND, AND TURKEY DATA FILE (FILE 10)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	2	0	0	0	54	205	146	67	41	25	12	5	1	558	2	0	0	556
1750	0	0	0	0	1	23	17	9	7	0	2	1	0	60	0	0	0	60
1800	2	0	0	0	2	46	12	11	7	0	1	0	0	81	2	0	0	79
1850	334	0	0	0	1	45	14	12	6	1	3	1	0	417	334	0	0	83
1900	95	0	0	0	5	164	48	25	6	11	5	1	0	360	97	2	0	261
1901	1	0	0	0	1	6	1	2	0	0	0	0	0	11	1	0	0	10
1902	0	0	0	0	0	4	0	0	0	0	0	1	0	5	0	0	0	5
1903	1	0	0	0	1	6	1	1	1	1	0	0	0	12	1	0	0	11
1904	0	0	0	0	1	5	2	5	0	0	1	0	0	14	2	0	0	12
1905	0	0	0	0	0	5	3	3	2	0	0	0	0	13	4	0	1	8
1906	0	0	0	0	0	2	0	4	2	1	0	1	0	10	0	0	0	10
1907	1	0	0	0	1	4	0	2	0	0	0	0	0	8	1	0	0	7
1908	0	0	0	0	0	8	0	2	0	3	0	0	0	13	3	0	0	10
1909	0	0	0	0	2	4	4	2	1	2	0	0	0	15	3	0	0	12
1910	0	0	0	0	2	3	0	1	4	1	1	0	0	12	1	1	0	10
1911	1	0	0	0	0	1	0	2	1	1	0	0	0	6	1	2	0	3
1912	1	0	0	0	0	5	1	3	1	1	0	0	0	12	6	0	0	6
1913	2	0	0	0	0	2	0	4	2	0	0	0	0	10	4	0	0	6
1914	1	0	0	0	0	1	0	0	5	2	1	0	0	10	6	2	0	2
1915	0	0	0	0	0	2	0	0	2	2	0	0	0	6	2	1	0	3
1916	0	0	0	0	0	0	0	2	0	1	0	0	0	3	1	0	0	2
1917	8	0	0	0	1	1	1	5	1	1	2	0	0	20	3	0	1	16
1918	3	0	0	0	3	4	3	6	2	2	0	0	0	23	7	0	2	14
1919	0	0	0	0	4	4	2	6	1	2	0	0	0	19	7	0	0	12
1920	0	0	0	0	3	3	2	7	1	1	0	1	1	19	2	0	0	17
1921	6	0	0	0	2	3	1	6	2	1	0	0	0	21	6	1	0	14
1922	7	0	0	0	4	1	1	9	7	1	1	0	0	31	12	0	0	19
1923	0	0	0	0	2	3	1	6	4	1	0	0	0	17	2	1	0	14
1924	5	0	0	0	6	5	2	3	2	2	0	0	0	25	10	1	0	14
1925	13	0	0	0	10	7	2	5	0	2	0	0	0	39	11	2	0	26
1926	9	0	0	0	7	6	3	6	1	2	0	0	0	34	15	4	0	15
1927	7	0	0	0	2	1	1	4	5	0	0	1	0	21	8	0	1	12
1928	24	0	0	0	10	5	7	6	1	2	0	0	0	55	16	1	1	37
1929	23	0	0	0	2	1	0	8	4	0	1	0	0	39	20	2	0	17
1930	18	0	0	0	6	4	3	8	8	0	1	0	0	48	19	3	0	26
1931	13	0	0	0	4	2	0	5	2	2	1	1	0	30	20	1	0	9
1932	12	0	0	0	4	2	2	7	1	1	1	0	0	30	10	5	0	15
1933	8	0	0	0	2	1	1	4	5	1	0	0	0	22	11	2	1	8
1934	3	0	0	0	1	2	2	7	1	1	1	0	0	18	7	2	0	9
1935	9	0	0	0	1	3	1	13	4	2	0	0	0	33	12	1	1	19
1936	9	0	0	0	5	4	1	5	4	1	0	0	0	29	10	6	0	13
1937	2	0	0	0	3	2	1	2	5	1	1	0	0	17	5	3	0	9
1938	7	0	0	0	11	3	0	13	1	3	0	0	0	38	19	3	1	15
1939	11	0	0	0	4	3	6	3	0	1	1	0	0	29	19	4	0	6
1940	113	5	22	14	15	12	5	9	1	1	0	0	0	197	165	20	1	11
1941	34	10	19	32	36	23	8	12	2	2	0	0	0	178	142	22	1	13
1942	31	16	63	90	47	20	13	12	2	4	0	0	0	298	266	24	2	6
1943	41	23	51	54	31	14	11	8	7	1	0	0	0	241	205	29	2	5
1944	21	11	42	57	14	14	16	4	5	4	0	0	0	188	139	40	0	9
1945	41	19	41	46	23	7	5	8	2	0	0	0	0	192	151	35	0	6
1946	83	26	45	52	45	20	7	6	3	1	0	0	0	288	243	38	1	6
1947	46	23	52	68	56	28	13	15	2	0	2	0	0	305	261	36	2	6
1948	26	15	57	59	29	24	15	17	2	3	0	0	0	247	189	48	0	10
1949	14	42	63	46	42	23	12	7	1	5	1	0	0	256	182	66	2	6
1950	58	37	78	73	44	29	16	20	3	3	1	0	1	363	280	66	1	16

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE PEOPLE'S REPUBLIC OF CHINA, NEW ZEALAND, AND TURKEY DATA FILE (FILE 10)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	37	28	66	89	37	29	14	26	15	4	1	1	0	347	253	61	1	32
1952	21	27	73	65	54	43	19	6	4	0	1	0	0	313	199	92	?	21
1953	33	119	98	89	64	52	20	9	1	2	0	0	0	487	366	100	7	14
1954	43	20	40	60	37	22	20	4	2	2	0	0	0	250	177	60	4	9
1955	21	4	38	49	42	16	16	12	5	3	1	0	0	207	106	74	1	26
1956	2	6	19	77	65	41	19	10	1	2	0	0	0	242	175	56	1	10
1957	3	15	27	53	58	40	10	3	7	4	0	0	0	220	146	65	2	7
1958	14	18	23	43	39	29	9	7	4	1	0	0	0	187	120	49	2	16
1959	24	18	30	63	71	34	13	9	5	2	1	0	0	270	169	61	4	36
1960	53	18	39	124	126	48	29	10	3	1	0	0	0	451	330	78	9	34
1961	24	55	67	165	93	65	16	11	5	1	0	0	0	502	393	82	4	23
1962	30	125	112	93	96	59	24	8	2	0	0	0	0	549	425	104	11	9
1963	8	82	73	110	82	52	11	10	2	2	0	0	0	432	318	106	4	4
1964	82	103	174	196	95	33	8	6	5	3	0	0	0	705	472	163	18	52
1965	100	91	124	206	146	57	26	12	2	0	0	0	0	764	461	180	27	96
1966	65	69	136	215	135	55	14	14	5	1	1	0	0	710	385	219	24	82
1967	110	54	164	234	113	55	10	10	2	1	0	0	0	753	386	203	34	130
1968	115	52	334	486	172	63	23	5	3	1	1	0	0	1255	713	272	18	252
1969	82	40	280	416	178	53	18	7	4	1	0	0	0	1079	580	326	53	120
1970	135	83	337	456	180	55	19	11	4	1	1	0	0	1282	734	314	46	188
1971	5	54	243	296	182	52	15	10	2	0	0	0	0	859	405	267	32	155
1972	2	40	193	301	120	55	9	8	3	3	1	0	0	735	386	269	30	50
1973	14	49	194	298	142	37	19	9	3	2	1	0	0	768	390	297	39	42
1974	8	29	252	375	156	57	14	7	1	2	0	0	0	901	532	288	40	41
1975	11	40	225	324	149	73	19	9	3	2	0	0	0	855	427	310	38	80
1976	29	93	400	380	150	42	36	14	6	6	1	0	0	1157	813	291	36	17
1977	5	25	108	119	58	22	8	2	0	0	0	0	0	347	199	129	19	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2222	1584	4402	5973	3390	2064	871	668	279	153	50	14	3	21673	13005	4990	526	3152

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.) FOR THE MULTISOURCE GLOBAL DATA FILE (FILE 11)

YEAR	MAGNITUDES														DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1850	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1901	0	0	0	0	0	0	0	0	0	0	11	6	5	23	1	0	0	22
1902	0	0	0	0	0	0	0	0	0	0	10	5	0	15	15	0	0	0
1903	0	0	0	0	0	0	0	0	0	0	4	3	1	8	8	0	0	0
1904	0	0	0	0	0	0	0	0	0	0	3	5	0	8	5	2	1	0
1905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1907	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1908	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1909	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1910	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1911	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1912	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1913	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1916	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1917	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1918	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1920	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0
1921	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1922	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1923	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1924	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1925	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1926	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1927	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1928	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1936	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1937	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1941	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	14	0	0	0	0	1	0	0	0	0	0	0	0	15	0	1	0	14

TABLE 2. SUMMARY OF EARTHQUAKE DATA BASE BY YEAR, MAGNITUDE, AND DEPTH (CONT.)
FOR THE MULTISOURCE GLOBAL DATA FILE (FILE 11)

YEAR	MAGNITUDES													DEPTHS (KM)			
	MAG NOT GIVEN	LESS THAN 3.5	3.5 TO 3.9	4.0 TO 4.4	4.5 TO 4.9	5.0 TO 5.4	5.5 TO 5.9	6.0 TO 6.4	6.5 TO 6.9	7.0 TO 7.4	7.5 TO 7.9	8.0 TO 8.4	8.5 TO 8.9	TOTAL	0 TO 70	71 TO 300	301 OR MORE	DEPTH NOT GIVEN
1951	24	0	0	0	0	0	0	0	0	0	0	0	0	24	1	4	0	19
1952	33	0	0	0	0	0	0	0	0	0	0	0	0	33	1	6	0	26
1953	51	0	0	0	0	3	1	1	0	0	0	0	0	56	0	8	0	48
1954	67	0	0	1	2	3	3	2	0	0	0	0	0	78	1	14	3	60
1955	74	0	0	0	2	7	3	2	0	0	0	0	0	88	2	14	8	64
1956	85	0	0	8	7	34	18	5	0	0	0	0	0	157	7	36	9	105
1957	62	0	0	3	14	27	11	0	1	0	0	0	0	118	0	27	0	91
1958	81	0	2	4	5	26	8	1	0	0	0	0	0	127	0	20	1	106
1959	85	0	1	3	16	28	6	0	0	0	0	0	0	139	0	20	2	117
1960	104	1	0	0	3	16	11	1	0	0	0	0	0	136	3	22	4	107
1961	110	54	45	41	32	17	0	0	1	0	0	0	0	300	221	66	2	11
1962	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
1963	14	0	0	0	0	0	0	0	0	0	0	0	0	14	1	0	0	13
1964	23	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	23
1965	21	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	21
1966	25	0	1	4	2	1	3	1	0	0	0	0	0	37	3	0	0	34
1967	13	0	0	1	0	1	0	0	0	0	0	0	0	15	0	0	0	15
1968	28	0	1	0	0	0	0	0	0	0	0	0	0	29	0	0	0	29
1969	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
1970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	6	0	0	0	0	0	0	0	0	0	0	0	0	6	5	0	0	1
1974	5	2	3	0	0	0	0	0	0	0	0	0	0	10	6	0	0	4
1975	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8
1977	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
1978	4	1	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	4
1979	19	1	0	1	0	0	0	0	0	0	0	0	0	21	6	0	0	15
1980	30	24	4	0	0	0	0	0	0	0	0	0	0	58	12	0	0	46
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	994	83	58	66	84	164	64	13	2	0	28	19	6	1581	301	240	30	1010

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE YR	MO	DY	TIME HR	MN	SEC	LATITUDE		LONGITUDE		DEPTH KM	MAGNITUDES Mb	Ms	OTHER		LOCAL	INT MAP	INT MAX	DTSVNWUI	F-E	CE	Q/N
ANK	0017						X 37.85	N	27.3	E				7.5	ANK					366		
LEE	0180	09					X 39.4	N	99.5	E				7.5	LEE			X		322		
LEE	0512	05	21				X 39.	N	113.	E				7.5	LEE			X		658		
ANK	0528						X 36.23	N	36.1	E				7.5	ANK					374		
ANK	0555	08	16				X 41.04	N	28.98	E				7.5	ANK					366		
LEE	1303	09	17				X 36.3	N	111.7	E				8.	LEE			XI		664		
ANK	1458						X 39.9	N	40.4	E				7.5	ANK					366		
ANK	1482						X 39.9	N	40.4	E				7.5	ANK					366		
LEE	1515	06	17				X 26.6	N	100.8	E				7.5	LEE			X		318		
LEE	1556	01	23				X 34.5	N	109.7	E				8.	LEE			XI		664		
LEE	1604	12	29				X 25.	N	119.5	E				8.	LEE					242		
LEE	1605	07	13				X 19.9	N	110.5	E				7.5	LEE			X		300		
ANK	1653	02	23				X 38.2	N	28.2	E				7.5	ANK					366		
LEE	1654	07	21				X 34.3	N	105.5	E				7.5	LEE			X		322		
LEE	1668	07	25				X 35.3	N	118.6	E				8.5	LEE			XII		664		
LEE	1679	09	02				X 40.	N	117.	E				8.	LEE			XI		658		
ANK	1688	07	12				X 38.4	N	26.9	E				7.5	ANK					365		
LEE	1695	05	18				X 36.	N	111.5	E				8.	LEE			X		664		
LEE	1709	10	14				X 37.4	N	105.3	E				7.5	LEE			X		323		
LEE	1718	06	19				X 35.	N	105.2	E				7.5	LEE			X		322		
LEE	1739	01	03				X 38.9	N	106.5	E				8.	LEE			X		323		
LEE	1786	06	01				X 29.9	N	102.3	E				7.5	LEE			IX		307		
OWN	1811	12	16	08	15		36.	N	90.	W		7.2	8.					XI		486		
OWN	1812	01	23	15			36.3	N	89.6	W		7.1	7.8					XI		486		
OWN	1812	02	07	09	45		36.5	N	89.6	W		7.4	8.2					XII		486		
LEE	1812	03	08				X 43.7	N	83.	E				7.5	LEE					332		
LEE	1830	06	12				X 36.4	N	114.2	E				7.5	LEE			X		664		
LEE	1833	09	06				X 25.2	N	103.	E				8.	LEE			XI		318		
WDS	1843	07	08	05	05		39.9	S	175.	E	33			7.5	WDS					159		I
LEE	1850	09	12				X 27.8	N	102.3	E				7.5	LEE			X		307		
WDS	1855	01	23	09	20		41.5	S	175.2	E	33			8.	WDS					159		F
ANK	1855	02	28				X 40.18	N	29.1	E				7.5	ANK					366		
ANK	1872	04	03				X 36.2	N	36.2	E				7.5	ANK					374		
LEE	1879	07	01				X 33.2	N	104.7	E				7.5	LEE			X		322		
LEE	1888	06	13				X 38.5	N	119.	E				7.5	LEE					658		
BDA	1897	02	07	07	36		40.	N	140.	E	60			8.3	BDA					227		19
BDA	1897	02	19	20	48		38.	N	142.	E	60			8.3	BDA					228		19
BDA	1897	02	19	23	48		38.	N	142.	E	60			7.9	BDA					228		19
BDA	1897	05	13	12	30		12.	N	124.	E	60			7.9	BDA					251		22
BDA	1897	06	12	11	06		26.	N	91.	E	60			8.7	BDA					317		26
CFR	1897	08	05	00	12		38.	N	143.	E				8.7	CFR					229		
CFR	1897	08	15	12			18.	N	120.	E				7.9	CFR					249		
BDA	1897	08	15	12	18		18.	N	120.	E	60			7.9	BDA					249		22
BDA	1897	08	16	07	54		39.	N	143.	E	60			7.9	BDA					229		19
BDA	1897	09	20	19	06		6.	N	122.	E	60			8.6	BDA					259		22
BDA	1897	09	21	05	12		6.	N	122.	E	60			8.7	BDA					259		22
BDA	1897	10	18	23	48		12.	N	126.	E	60			8.1	BDA					248		22
BDA	1897	10	20	14	24		12.	N	126.	E	60			7.9	BDA					248		22
BDA	1898	04	22	23	36		39.	N	142.	E	60			8.3	BDA					228		19
BDA	1898	04	29	16	18		12.	N	86.	W	60			7.9	BDA					075		6
BDA	1898	06	05	00	12		38.	N	143.	E	60			8.7	BDA					229		19
BDA	1899	01	24	23	43		17.	N	98.	W	60			8.4	BDA					059		5
BDA	1899	06	14	11	09		18.	N	77.	W	60			7.8	BDA					086		7
BDA	1899	09	04	00	22		60.	N	142.	W	60			8.2	BDA					002		1
BDA	1899	09	10	17	04		60.	N	140.	W	60			7.8	BDA					019		2
CFR	1899	09	10	17	04		60.	N	142.	W	25A			7.8	CFR			VII		002	F	
CFR	1899	09	10	21	40		60.	N	140.	W				8.6	PAS			XI	UTS	019	D	
BDA	1899	09	29	17	03		3.	S	128.5	E	60			7.8	BDA					272		23
BDA	1899	11	23	09	49		53.	N	159.	E	60			7.9	BDA					218		19
BDA	1899	11	24	18	42		32.	N	131.	E	60			7.8	BDA					235		20

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)

[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE	TIME	LOCATION				DEPTH	MAGNITUDES				INT	INT		F-E	CE	Q/N
	YR MO DY	HR MN SEC	LATITUDE		LONGITUDE		KM	Mb	Ms	OTHER	LOCAL	MAP	MAX	DTSVNWUI			
BDA	1899 11 24	18 55	32.	N	131.	E	60			7.8 BDA					235		20
CFR	1900 01 20	06 33	20.	N	105.	W	25A			8.3 PAS					055		
BDA	1900 05 16	20 12	20.	N	105.	W	60			7.8 BDA					055		5
BDA	1900 06 21	20 52	20.	N	80.	W	60			7.9 BDA					085		7
BDA	1900 07 29	06 59	10.	S	165.	E	60			8.1 BDA					184		14
BDA	1900 10 07	21 04	4.	S	140.	E	60			7.8 BDA					201		16
BDA	1900 10 09	12 28	60.	N	142.	W	60			8.2 BDA					002		1
BDA	1900 10 29	09 11	11.	N	66.	W	60			8.4 BDA					094		7
BDA	1900 12 25	05 04	43.	N	146.	E	60			7.8 BDA					221		19
CFR	1901 01 07	00 29	2.	S	82.	W	25A			7.8 PAS					104		
CFR	1901 04 05	23 30	45.	N	148.	E	25A			7.9 PAS					221		
CFR	1901 06 24	07 02	27.	N	130.	E	25A			7.9 PAS					238		
CFR	1901 08 09	09 23	40.	N	144.	E	25A			7.9 PAS				T	229	D	
BDA	1901 08 09	13 01	22.	S	170.	E	60			8.4 BDA					189		14
CFR	1901 08 09	18 33	40.	N	144.	E	25A			8.3 PAS				T	229		
CFR	1901 12 14	22 57	14.	N	122.	E	25A			7.8 PAS					249		
CFR	1901 12 31	09 02	52.	N	177.	W	25A			7.8 PAS					007		
CFR	1902 01 01	05 20	55.	N	165.	W	25A			7.8 PAS					009		
BDA	1902 01 24	23 27	8.	S	150.	E	60			7.8 BDA					207		16
BDA	1902 02 09	07 35	20.	S	174.	W	60			7.8 BDA					173		12
CFR	1902 04 19	02 23	14.	N	91.	W	25A			8.3 PAS					070		
BDA	1902 08 22	03	40.	N	77.	E	60			8.6 BDA					320		27
CFR	1902 09 22	01 46	18.	N	146.	E	25A			8.1 PAS					216		
CFR	1902 09 23	20 18	16.	N	93.	W	25A			8.4 PAS					061		
BDA	1902 12 12	23 10	29.	N	114.	W	60			7.8 BDA					048		4
BDA	1903 01 04	05 07	20.	S	175.	W	400			8. BDA					173		12
CFR	1903 01 14	01 47	15.	N	98.	W	25A			8.3 PAS					065		
CFR	1903 02 01	09 34	48.	N	98.	E	25A			7.8 PAS					334		
CFR	1903 02 27	00 43	8.	S	106.	E	25A			8.1 PAS					282		
CFR	1903 05 13	06 34	17.	S	168.	E	25A			7.9 PAS					186		
BDA	1903 06 02	13 17	57.	N	156.	W	100			8.3 BDA					012		1
BDA	1903 08 11	04 32 54.	36.	N	23.	E	100			8.3 BDA					368		30
BDA	1903 12 28	02 56	7.	N	127.	E	60			7.8 BDA					248		22
BDA	1904 01 20	14 52 06.	7.	N	79.	W	60			7.9 BDA					083		6
KRK	1904 04 04	10 25	41.8	N	23.1	E	40				7.8 LH KRK			X	363		635
BDA	1904 06 07	08 17 54.	40.	N	134.	E	350			7.9 BDA					660		51
BDA	1904 06 25	14 45 36.	52.	N	159.	E	60			8.3 BDA					219		19
BDA	1904 06 25	21 00 30.	52.	N	159.	E	60			8.1 BDA					219		19
BDA	1904 06 27	00 09	52.	N	159.	E	60			7.9 BDA					219		19
WDS	1904 08 08	22 51	40.5	S	177.	E	33			7.5 WDS					160		F
BDA	1904 08 24	20 59 54.	30.	N	130.	E	60			7.9 BDA					235		20
BDA	1904 08 27	21 56 06.	64.	N	151.	W	60			8.3 BDA					001		1
BDA	1904 12 20	05 44 18.	8.5	N	83.	W	60			8.3 BDA					078		6
BDA	1905 01 22	02 43 54.	1.	N	123.	E	90			8.4 BDA					265		23
BDA	1905 02 14	08 46 36.	53.	N	178.	W	60			7.9 BDA					007		1
BDA	1905 03 18	00 58	27.5	S	173.	W	60			7.5 BDA					177		12
BDA	1905 04 04	00 50	33.	N	76.	E	60			8.6 BDA					303		26
BDA	1905 05 18	13 45 06.	4.	S	149.	E	60			7.5 BDA					203		16
BDA	1905 06 02	05 39 42.	34.	N	132.	E	100			7.9 BDA					232		20
BDA	1905 06 30	17 07	1.	S	168.	W	60			7.6 BDA					624		39
3DA	1905 07 06	16 21	39.5	N	142.5	E	60			7.9 BDA					228		19
BDA	1905 07 09	09 40 24.	49.	N	99.	E	60			8.4 BDA					334		28
BDA	1905 07 23	02 46 12.	49.	N	98.	E	60			8.7 BDA					333		28
BDA	1905 09 01	02 45 36.	45.	N	143.	E	230			7.5 BDA					224		19
BDA	1905 09 08	01 43 07.	39.	N	16.	E	60			7.9 BDA					390		31
BDA	1905 09 15	06 02 46.	53.	N	164.	E	60			7.8 BDA					004		1
BDA	1905 10 21	11 01 37.	42.	N	42.	E	60			7.5 BDA					362		30
KRK	1905 11 08	22 06	40.	N	24.	E	33			7.5 KRK				X	365		B
BDA	1906 01 21	13 49 35.	34.	N	138.	E	340			8.4 BDA					230		51
BDA	1906 01 31	15 36	1.	N	81.5	W	60			8.9 BDA					104		8

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE YR	MO	DY	TIME HR	MN	SEC	LATITUDE		LONGITUDE		DEPTH KM	MAGNITUDES Mb	Ms	OTHER	LOCAL	INT MAP	INT MAX	DTSVNWUI	F-E	CE	Q/N
BDA	1906	04	10	21	22	25.	19.	N	113.8	W	60			7.5 BDA							
BDA	1906	04	18	13	12		38.	N	123.	W	60			8.3 BDA					053		5
BDA	1906	08	17	00	10	42.	51.	N	179.	E	60			8.3 BDA					035		3
BDA	1906	08	17	00	40		33.	S	72.	W	60			8.6 BDA					006		1
BDA	1906	09	14	16	04	18.	7.	S	149.	E	60			8.4 BDA					134		8
																			192		15
BDA	1906	09	28	15	24	54.	2.	S	79.	W	150			7.9 BDA							
BDA	1906	10	02	02	52		4.	S	149.	E	60			7.7 BDA					105		8
BDA	1906	11	19	07	18	18.	22.	S	109.	E	60			7.75 BDA					203		16
BDA	1906	12	03	22	59	24.	15.	N	61.	W	100			7.5 BDA					589		38
BDA	1906	12	22	18	21		43.5	N	85.	E	60			8.3 BDA					092		7
																			332		28
BDA	1906	12	23	17	22	40.	59.	N	171.	W	60			7.6 BDA							
BDA	1906	12	26	06	53	28.	18.	S	71.	W	60			7.9 BDA					003		1
BDA	1907	01	04	05	19	29.	2.	N	94.5	E	60			7.8 BDA					121		8
BDA	1907	04	15	06	08	06.	17.	N	100.	W	60			8.3 BDA					705		46
BDA	1907	05	04	06	51		7.5	S	153.7	E	60			7.7 BDA					059		5
																			192		15
BDA	1907	05	25	14	02	08.	51.5	N	147.	E	600			7.9 BDA							
BDA	1907	06	25	17	54	36.	1.	N	127.	E	200			7.9 BDA					663		51
BDA	1907	09	02	16	01	30.	52.	N	173.	E	60			7.75 BDA					267		23
BDA	1907	10	16	14	57		28.	N	112.5	W	60			7.7 BDA					005		1
BDA	1907	10	21	04	23	36.	38.	N	69.	E	60			8.1 BDA					049		4
																			715		48
BDA	1908	03	05	02	16		9.	N	126.	E	60			7.5 BDA							
BDA	1908	03	26	23	03	30.	18.	N	99.	W	80			8.1 BDA					259		22
BDA	1908	03	27	03	45	30.	17.	N	101.	W	60			7.5 BDA					059		5
BDA	1908	05	05	06	16		3.	N	123.	E	60			7.5 BDA					058		5
BDA	1908	11	06	07	12		45.	N	150.	E	60			7.6 BDA					262		23
																			221		19
BDA	1908	12	12	12	08		14.	S	78.	W	60			8.2 BDA							
BDA	1909	01	23	02	48		33.	N	53.	E	60			7.7 BDA					114		8
BDA	1909	02	22	09	21	42.	18.	S	179.	W	550			7.9 BDA					348		29
BDA	1909	03	13	14	29		31.5	N	142.5	E	80			8.3 BDA					181		12
BDA	1909	04	10	19	36		45.	N	165.	E	60			7.8 BDA					211		18
																			016		1
BDA	1909	06	03	18	44		2.	S	101.	E	60			7.7 BDA							
BDA	1909	06	08	05	46		26.5	S	70.5	W	60			7.6 BDA					274		24
BDA	1909	07	07	21	37	50.	36.5	N	70.5	E	230			8.1 BDA					122		8
BDA	1909	07	07	21	39	05.	36.5	N	70.5	E	60			8. BDA					718		53
BDA	1909	07	30	10	51	54.	17.	N	100.5	W	60			7.75 BDA					718		48
																			059		5
BDA	1909	11	10	06	13	30.	32.	N	131.	E	190			7.9 BDA							
BDA	1909	12	09	23	23		10.	S	165.	E	60			7.7 BDA					235		20
BDA	1910	01	01	11	02		16.5	N	84.	W	60			7.5 BDA					184		14
BDA	1910	04	12	00	22	13.	25.5	N	122.5	E	200			8.3 BDA					094		7
BDA	1910	05	22	06	25		42.	N	145.	E	60			7.5 BDA					243		21
																			224		19
BDA	1910	06	01	05	55	30.	20.	S	169.	E	80			7.5 BDA							
G-R	1910	06	16	06	30	42.	19.	S	169.5	E	100			8.6 PAS					186		14
BDA	1910	06	16	09	30	42.	19.	S	169.5	E	100			8.6 BDA					186		BBB
BDA	1910	11	09	06	02		15.	S	166.	E	70			7.9 BDA					186		14
BDA	1910	11	26	04	39		14.	S	167.	E	60			8. BDA					186		14
																			186		14
BDA	1911	01	03	23	25	45.	43.5	N	77.5	E	60			8.7 BDA							
BDA	1911	02	18	18	41	03.	40.	N	73.	E	60			7.75 BDA					330		28
BDA	1911	05	04	23	36	54.	51.	N	157.	E	240			7.6 BDA					716		48
BDA	1911	06	07	11	02	42.	17.5	N	102.5	W	60			7.9 BDA					218		19
BDA	1911	06	15	14	26		29.	N	129.	E	160			8.7 BDA					056		5
																			238		20
BDA	1911	07	04	13	33	26.	36.	N	70.5	E	190			7.6 BDA							
BDA	1911	07	12	04	07	36.	9.	N	126.	E	60			7.75 BDA					718		53
BDA	1911	08	16	22	41	18.	7.	N	137.	E	60			8.1 BDA					259		22
G-R	1911	12	16	19	14	18.	17.	N	100.5	W	50			7.5 PAS					209		17
BDA	1912	05	06	18	59	43.	64.	N	20.	W	60			7.5 BDA					059		
																			638		40
BDA	1912	05	23	02	24	06.	21.	N	97.	E	60			7.9 BDA							
BDA	1912	08	09	01	29		40.5	N	27.	E	60			7.75 BDA					296		25
BDA	1912	09	29	20	51		7.	N	138.	E	60			7.6 BDA					366		30
BDA	1912	11	07	07	40	24.	57.5	N	155.	W	90			7.5 BDA					209		17
BDA	1912	12	07	22	46	50.	29.	S	62.5	W	620			7.5 BDA					012		1
																			132		8

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE			TIME			LOCATION				DEPTH	MAGNITUDES				INT	INT		F-E	CE	Q/N
	YR	MO	DY	HR	MN	SEC	LATITUDE		LONGITUDE		KM	Mb	Ms	OTHER	LOCAL	MAP	MAX	DTSVNWUI			
BDA	1913	03	14	08	45		4.5	N	126.5	E	60			8.3 BDA							
BDA	1913	04	25	17	56	08.	9.5	N	127.8	E	60			7.7 BDA					263		23
BDA	1913	05	30	11	46	46.	5.	S	154.	E	60			7.5 BDA					248		22
BDA	1913	06	26	04	57	01.	20.	S	174.	W	60			8.2 BDA					193		15
BDA	1913	08	01	17	10	57.	47.5	N	155.5	E	60			7.7 BDA					173		12
																			222		19
BDA	1913	08	06	22	14	24.	17.	S	74.	W	60			7.9 BDA							
BDA	1913	10	14	08	08	48.	19.5	S	169.	E	230			8.1 BDA					114		8
BDA	1913	11	10	21	12	30.	18.	S	169.	E	80			7.5 BDA					186		14
BDA	1914	01	30	03	35	50.	35.	S	73.	W	60			8.2 BDA					186		14
BDA	1914	03	30	00	41	18.	17.	N	92.	W	150			7.5 BDA					134		8
																			061		5
BDA	1914	05	26	14	22	42.	2.	S	137.	E	60			7.9 BDA							
BDA	1914	06	25	19	06	44.	4.5	S	99.	E	60			8.1 BDA					201		16
LEE	1914	08	04	22	41	36.	43.3	N	93.1	E				7.5 LEE					273		24
BDA	1914	10	03	22	06	34.	38.	N	30.	E	60			7.7 BDA					332		
BDA	1914	10	23	06	18	34.	6.	N	132.5	E	60			7.9 BDA					366		30
																			209		17
BDA	1914	11	24	11	53	30.	22.	N	143.	E	110			8.7 BDA							
BDA	1915	01	13	06	52	38.	42.	N	13.5	E	60			7.5 BDA					213		18
BDA	1915	02	28	18	59	05.	23.6	N	123.5	E	60			7.7 BDA					381		31
BDA	1915	05	01	05			47.	N	155.	E	60			8.1 BDA					246		21
BDA	1915	06	06	21	29	37.	18.5	S	68.5	W	160			7.6 BDA					222		19
																			124		8
BDA	1915	07	31	01	31	24.	54.	N	162.	E	60			7.75 BDA							
BDA	1915	09	07	01	20	48.	14.	N	89.	W	80			7.9 BDA					218		19
BDA	1915	10	03	06	52	48.	40.5	N	117.5	W	60			7.75 BDA					070		5
BDA	1915	11	01	07	23	43.	39.	N	142.5	E	60			7.8 BDA					037		5
BDA	1916	01	01	13	20	36.	4.	S	154.	E	60			7.9 BDA					228		19
																			193		15
BDA	1916	01	13	06	18	16.	3.	S	136.	E	60			8.1 BDA							
BDA	1916	01	13	08	20	48.	3.	S	135.5	E	60			8.1 BDA					201		16
BDA	1916	01	24	06	55	07.	41.	N	37.	E	60			7.8 BDA					196		16
BDA	1916	02	01	07	36	22.	29.5	N	131.5	E	60			8. BDA					366		30
BDA	1916	02	06	21	51	19.	48.5	N	178.5	E	60			7.7 BDA					239		20
																			016		1
BDA	1916	02	27	20	20	36.	12.	N	90.	W	60			7.6 BDA							
BDA	1916	04	18	04	01	48.	53.3	N	170.	W	170			7.5 BDA					076		6
BDA	1916	04	21	11	31	45.	33.	N	141.	E	60			7.8 BDA					009		1
BDA	1916	04	24	08	02	08.	11.	N	85.	W	60			7.6 BDA					229		19
BDA	1916	06	21	21	32	30.	28.5	S	63.	W	600			7.5 BDA					075		6
																			132		8
BDA	1916	08	03	01	30	02.	4.	S	144.5	E	60			7.5 BDA							
BDA	1916	08	25	09	44	42.	21.	S	68.	W	180			7.5 BDA					200		16
BDA	1916	08	28	06	39	29.	30.	N	81.	E	60			7.7 BDA					124		8
BDA	1916	10	31	15	30	33.	46.5	N	160.	E	60			7.7 BDA					306		26
BDA	1917	01	30	02	45	36.	56.5	N	163.	E	60			8.1 BDA					222		19
																			218		19
BDA	1917	05	01	18	26	30.	29.	S	177.	W	60			8.6 BDA							
BDA	1917	05	31	08	47	20.	54.5	N	160.	W	60			7.8 BDA					178		12
BDA	1917	06	26	05	49	42.	15.5	S	173.	W	60			8.7 BDA					012		1
BDA	1917	07	04	00	38	20.	25.	N	123.	E	60			7.7 BDA					173		12
BDA	1917	07	30	23	54	05.	29.	N	104.	E	60			7.5 BDA					245		21
																			307		26
BDA	1917	07	31	03	23	10.	42.5	N	131.	E	460			7.5 BDA							
BDA	1917	08	30	04	07	15.	7.5	S	128.	E	100			7.75 BDA					657		51
BDA	1917	11	16	03	19	25.	29.	S	177.	W	60			7.8 BDA					280		24
BDA	1917	12	29	22	50	20.	15.	N	97.	W	60			7.7 BDA					178		12
BDA	1918	01	30	21	18	33.	45.5	N	135.	E	330			7.7 BDA					066		5
																			661		51
BDA	1918	02	07	05	20	30.	6.5	N	126.5	E	120			7.5 BDA							
BDA	1918	05	20	17	55	10.	28.5	S	71.5	W	80			7.9 BDA					259		22
BDA	1918	07	03	06	52	05.	3.5	S	142.5	E	60			7.5 BDA					135		8
BDA	1918	07	08	10	22	07.	24.5	N	91.	E	60			7.6 BDA					200		16
G-R	1918	08	15	12	18	12.	5.5	N	123.	E	25A			8.3 PAS				T	315		26
BDA	1918	09	07	17	16	13.	45.5	N	151.5	E	60			8.3 BDA					259	C	
BDA	1918	10	11	14	14	30.	18.5	N	67.5	W	60			7.5 BDA					221		19
BDA	1918	11	08	04	38		44.5	N	151.5	E	60			7.9 BDA					089		7
BDA	1918	11	18	18	41	55.	7.	S	129.	E	190			8.1 BDA					222		19
BDA	1918	12	04	11	47	48.	26.	S	71.	W	60			7.75 BDA					280		24
																			121		8

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE			TIME			LOCATION				DEPTH	MAGNITUDES					INT	INT		F-E	CE	Q/N
	YR	MO	DY	HR	MN	SEC	LATITUDE		LONGITUDE		KM	Mb	Ms	OTHER		LOCAL	MAP	MAX	DTSVNWUI			
BDA	1919	01	01	02	59	57.	19.5	S	176.5	W	180			8.3	BDA					181		12
BDA	1919	04	30	07	17	05.	19.	S	172.5	W	60			8.4	BDA					174		12
BDA	1919	05	03	00	52		40.5	N	145.5	E	60			7.6	BDA					229		19
BDA	1919	05	06	19	41	12.	5.	S	154.	E	60			8.1	BDA					193		15
BDA	1920	02	02	11	22	18.	4.	S	152.5	E	60			7.7	BDA					192		15
BDA	1920	06	05	04	21	28.	23.5	N	122.	E	60			8.3	BDA					243		21
BDA	1920	09	20	14	39		20.	S	168.	E	60			8.3	BDA					188		14
BDA	1920	12	16	12	05	48.	36.	N	105.	E	60			8.6	BDA					323		27
BDA	1921	02	04	08	22	44.	15.	N	91.	W	120			7.5	BDA					062		5
BDA	1921	09	11	04	01	38.	11.	S	111.	E	60			7.5	BDA					282		24
BDA	1921	11	11	18	36	08.	8.	N	127.	E	60			7.5	BDA					248		22
BDA	1921	11	15	20	36	38.	36.5	N	70.5	E	215			8.1	BDA					718		53
BDA	1921	12	18	15	29	35.	2.5	S	71.	W	650			7.9	BDA					111		8
BDA	1922	01	17	03	50	33.	2.5	S	71.	W	650			7.6	BDA					111		8
BDA	1922	09	01	19	16	06.	24.5	N	122.	E	60			7.6	BDA					243		21
BDA	1922	11	11	04	32	36.	28.5	S	70.	W	60			8.4	BDA					136		8
BDA	1922	12	06	13	55	36.	36.5	N	70.5	E	230			7.5	BDA					718		53
BDA	1923	02	03	16	01	41.	54.	N	161.	E	60			8.4	BDA					218		19
BDA	1923	09	01	02	58	36.	35.3	N	139.5	E	60			8.3	BDA					230		19
BDA	1923	09	02	02	46	40.	35.	N	139.5	E	60			7.7	BDA					230		19
BDA	1923	10	07	03	29	34.	1.8	S	128.8	E	60			7.5	BDA					267		23
BDA	1924	04	14	16	20	23.	6.5	N	126.5	E	60			8.3	BDA					259		22
BDA	1924	06	26	01	37	34.	56.	S	157.5	E	60			8.3	BDA					167		11
BDA	1924	07	24	04	55	17.	49.5	S	159.	E	50			7.5	BDA					165		11
BDA	1925	03	22	08	41	55.	18.5	S	168.5	E	50			7.6	BDA					186		14
BDA	1925	10	13	17	40	34.	11.	N	42.	W	60			7.5	BDA					403		32
BDA	1926	04	12	08	32	28.	10.	S	161.	E	60			7.5	BDA					193		15
KRK	1926	06	26	19	46		36.1	N	27.8	E	100					7.7 LH KRK				369		511
TRI	1926	06	26	19	48		36.	N	27.5	E	100					7.7 MS TRI		XI		369		
BDA	1926	06	29	14	27	06.	27.	N	127.	E	130			7.5	BDA					238		20
BDA	1926	10	03	19	38	01.	49.	S	161.	E	60			7.9	BDA					165		11
BDA	1926	10	26	03	44	41.	3.3	S	138.5	E	60			7.9	BDA					201		16
BDA	1927	03	07	09	27	36.	35.8	N	134.8	E	60			7.9	BDA					232		20
BDA	1927	05	22	22	32	42.	36.8	N	102.	E	60			8.3	BDA					325		27
BDA	1928	03	09	18	05	27.	2.5	S	88.5	E	60			8.1	BDA					425		33
BDA	1928	03	16	05	01	02.	22.	S	170.5	E	60			7.5	BDA					189		14
BDA	1928	03	22	04	17		16.	N	96.	W	60			7.5	BDA					060		5
BDA	1928	06	17	03	19	27.	16.3	N	98.	W	60			7.9	BDA					058		5
BDA	1928	10	09	03	01	08.	16.	N	97.	W	60			7.6	BDA					060		5
BDA	1928	12	01	04	06	10.	35.	S	72.	W	60			8.3	BDA					135		8
BDA	1929	01	13	00	03	12.	49.8	N	154.8	E	140			7.7	BDA					221		19
BDA	1929	03	07	01	34	39.	51.	N	170.	W	60			8.6	BDA					009		1
BDA	1929	06	16	22	47	32.	41.8	S	172.3	E	60			7.6	BDA					162		11
BDA	1929	06	27	12	47	05.	54.	S	29.5	W	60			8.3	BDA					153		10
BDA	1929	10	19	10	12	52.	23.	S	69.	W	100			7.5	BDA					123		8
BDA	1929	12	17	10	58	30.	52.5	N	171.5	E	60			7.6	BDA					005		1
ANK	1930	05	06	22	34	31.	37.98	N	44.48	E	70			7.6	ANK					343		
BDA	1931	01	15	01	50	41.	16.	N	96.8	W	60			7.9	BDA					060		5
BDA	1931	01	27	20	09	13.	25.6	N	96.8	E	60			7.6	BDA					296		25
BDA	1931	02	02	22	46	42.	39.5	S	177.	E	60			7.9	BDA					160		11
BDA	1931	03	09	03	48	50.	40.5	N	142.5	E	60			7.7	BDA					228		19
BDA	1931	08	10	21	18	40.	47.	N	90.	E	60			7.9	BDA					332		28
BDA	1931	10	03	19	13	13.	10.5	S	161.8	E	60			8.1	BDA					193		15
BDA	1931	10	10	00	19	53.	10.	S	161.	E	60			7.7	BDA					193		15
BDA	1931	11	02	10	02	59.	32.	N	131.5	E	60			7.5	BDA					235		20
BDA	1932	05	14	13	11		0.5	N	126.	E	60			8.3	BDA					266		23
BDA	1932	05	26	16	09	40.	25.5	S	179.3	E	600			7.9	BDA					171		12
BDA	1932	06	03	10	36	50.	19.5	N	104.3	W	60			8.1	BDA					055		5
BDA	1932	06	18	10	12	10.	19.5	N	103.5	W	60			7.9	BDA					524		34
BDA	1932	12	25	02	04	24.	39.3	N	96.5	E	60			7.6	BDA					322		27

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE			TIME			LOCATION				DEPTH	MAGNITUDES				INT	INT		F-E	CE	Q/N
	YR	MO	DY	HR	MN	SEC	LATITUDE		LONGITUDE		KM	Mb	Ms	OTHER	LOCAL	MAP	MAX	DTSVNWUI			
BDA	1933	02	23	08	09	12.	20.	S	71.	W	40			7.6 BDA					121		8
BDA	1933	03	02	17	30	54.	39.3	N	144.5	E	60			8.9 BDA					229		19
BDA	1933	06	24	21	54	46.	5.5	S	104.8	E	60			7.5 BDA					274		24
BDA	1934	01	15	08	43	18.	26.5	N	86.5	E	60			8.4 BDA					309		26
BDA	1934	02	14	03	59	34.	17.5	N	119.	E	60			7.9 BDA					248		22
WDS	1934	03	05	11	46		40.5	S	175.6	E	33			7.5 WDS					159		S
BDA	1934	07	18	01	36	24.	8.	N	82.5	W	60			7.7 BDA					080		6
BDA	1934	07	18	19	40	15.	11.8	S	166.5	E	60			8.1 BDA					184		14
BDA	1935	05	30	21	32	46.	29.5	N	66.8	E	60			7.5 BDA					710		47
BDA	1935	09	11	14	04	02.	43.	N	146.5	E	60			7.6 BDA					221		19
BDA	1935	09	20	01	46	33.	3.5	S	141.8	E	60			7.9 BDA					202		16
BDA	1935	12	15	07	07	48.	9.8	S	161.	E	60			7.6 BDA					193		15
BDA	1935	12	28	02	35	22.	0.	N	98.3	E	60			8.1 BDA					706		46
BDA	1936	04	01	02	09	15.	4.5	N	126.5	E	60			7.7 BDA					263		23
BDA	1937	01	07	13	20	35.	35.5	N	98.	E	60			7.6 BDA					325		27
BDA	1937	04	16	03	01	37.	21.5	S	177.	W	400			8.1 BDA					181		12
BDA	1937	08	20	11	59	16.	14.5	N	121.5	E	60			7.5 BDA					249		22
BDA	1937	12	23	13	17	56.	16.8	N	98.5	W	60			7.5 BDA					058		5
BDA	1938	02	01	19	04	18.	5.3	S	130.5	E	60			8.6 BDA					280		24
BDA	1938	05	12	15	38	57.	6.	S	147.8	E	60			7.5 BDA					207		16
BDA	1938	05	19	17	08	21.	1.	S	120.	E	60			7.9 BDA					268		23
BDA	1938	06	10	09	53	39.	25.5	N	125.	E	60			7.7 BDA					246		21
BDA	1938	11	05	08	43	21.	36.8	N	141.8	E	60			7.7 BDA					228		19
BDA	1938	11	05	10	50	15.	37.3	N	141.8	E	60			7.7 BDA					228		19
BDA	1938	11	06	08	53	53.	37.3	N	142.3	E	60			7.6 BDA					229		19
BDA	1938	11	10	20	18	43.	55.5	N	158.	W	60			8.7 BDA					012		1
BDA	1939	01	25	03	32	14.	36.3	S	72.3	W	60			8.3 BDA					135		8
BDA	1939	01	30	02	18	27.	6.5	S	155.5	E	60			7.9 BDA					193		15
BDA	1939	04	30	02	55	30.	10.5	S	158.5	E	60			8.1 BDA					193		15
BDA	1939	12	21	21	00	40.	0.	N	123.	E	150			8.6 BDA					265		23
KRK	1939	12	26	23	57	16.	39.7	N	39.7	E	33			8. KRK			XI		366		B
BDA	1939	12	26	23	57	21.	39.5	N	38.5	E	60			7.9 BDA					366		30
BDA	1940	05	24	16	33	57.	10.5	S	77.	W	60			8.4 BDA					115		8
BDA	1940	07	14	05	52	53.	51.8	N	177.5	E	80			7.75 BDA					006		1
BDA	1940	08	01	15	08	21.	44.5	N	139.	E	60			7.7 BDA					223		19
BDA	1941	04	15	19	09	56.	18.	N	103.	W	60			7.7 BDA					056		5
BDA	1941	06	26	11	52	03.	12.5	N	92.5	E	60			8.7 BDA					703		46
BDA	1941	11	18	16	46	22.	32.	N	132.	E	60			7.9 BDA					236		20
BDA	1941	11	25	18	03	55.	37.5	N	18.5	W	60			8.4 BDA					402		32
BDA	1941	12	05	20	46	58.	8.5	N	83.	W	60			7.5 BDA					078		6
BDA	1942	04	08	15	40	24.	13.5	N	121.	E	60			7.9 BDA					250		22
BDA	1942	05	14	02	13	18.	0.8	S	81.5	W	60			8.3 BDA					104		8
BDA	1942	05	28	01	01	48.	0.	N	124.	E	120			7.5 BDA					265		23
BDA	1942	08	06	23	36	59.	14.	N	91.	W	60			8.3 BDA					070		5
BDA	1942	08	24	22	50	27.	15.	S	76.	W	60			8.6 BDA					114		8
BDA	1942	11	10	11	41	27.	49.5	S	32.	E	60			8.3 BDA					431		33
BDA	1943	02	22	09	20	45.	17.8	N	101.5	W	60			7.5 BDA					058		5
BDA	1943	04	06	16	07	15.	30.8	S	72.	W	60			8.3 BDA					134		8
BDA	1943	05	25	23	07	36.	7.5	N	128.	E	60			8.1 BDA					260		22
BDA	1943	06	09	03	06	22.	1.	S	101.	E	50			7.6 BDA					274		24
BDA	1943	07	23	14	53	09.	9.5	S	110.	E	90			8.1 BDA					282		24
BDA	1943	07	29	03	02	16.	19.3	N	67.5	W	60			7.9 BDA					089		7
BDA	1943	09	06	03	41	30.	53.	S	159.	E	60			7.9 BDA					167		11
BDA	1943	09	14	02	01	12.	22.	S	171.	E	50			7.5 BDA					189		14
BDA	1943	09	14	07	18	08.	30.	S	177.	W	60			7.6 BDA					178		12
G-R	1943	11	06	08	31	37.	6.	S	134.5	E				7.6 PAS					204		
BDA	1943	11	26	22	20	36.	41.	N	34.	E	60			7.6 BDA					366		30
BDA	1944	03	22	00	43	18.	8.5	S	123.5	E	220			7.5 BDA					286		24
BDA	1944	05	25	12	58	05.	2.5	S	152.8	E	60			7.5 BDA					190		15
BDA	1944	10	05	17	28	27.	22.5	S	172.	E	120			7.5 BDA					189		14

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE			TIME			LOCATION					DEPTH	MAGNITUDES				INT	INT		F-E	CE	Q/N
	YR	MO	DY	HR	MN	SEC	LATITUDE		LONGITUDE			KM	Mb	Ms	OTHER	LOCAL	MAP	MAX	DTSVNWUI			
BDA	1944	11	24	04	49	03.	19.	S	169.	E		170			7.5 BDA							
BDA	1944	12	07	04	35	42.	33.8	N	136.	E		60			8.3 BDA					186		14
BDA	1945	11	27	21	56	50.	24.5	N	63.	E		60			8.3 BDA					233		20
BDA	1945	12	28	17	48	45.	6.	S	150.	E		60			7.8 BDA					356		29
BDA	1946	08	02	19	18	48.	26.5	S	70.5	W		60			7.9 BDA					192		15
																				122		8
BDA	1946	08	04	17	51	05.	19.3	N	69.	W		60			8.1 BDA							
BDA	1946	08	08	13	28	28.	19.5	N	69.5	W		60			7.9 BDA					088		7
BDA	1946	09	12	15	17	15.	23.5	N	96.	E		60			7.5 BDA					088		7
BDA	1946	09	12	15	20	20.	23.5	N	96.	E		60			7.75 BDA					296		25
BDA	1946	09	29	03	01	55.	4.5	S	153.5	E		60			7.75 BDA					296		25
																				190		15
BDA	1946	11	02	18	28	25.	41.5	N	72.5	E		60			7.6 BDA					716		48
BDA	1946	11	04	21	47	47.	39.8	N	54.5	E		60			7.5 BDA					340		29
BDA	1946	12	20	19	19	05.	32.5	N	134.5	E		60			8.4 BDA					236		20
BDA	1947	03	17	08	19	32.	33.	N	99.5	E		60			7.7 BDA					325		27
BDA	1947	05	06	20	30	32.	6.5	S	148.5	E		60			7.6 BDA					192		15
BDA	1947	07	29	13	43	22.	28.5	N	94.	E		60			7.9 BDA					313		26
BDA	1948	01	24	17	46	40.	10.5	N	122.	E		60			8.3 BDA					254		22
BDA	1948	03	01	01	12	28.	3.	S	127.5	E		60			7.9 BDA					272		23
BDA	1948	05	14	22	31	43.	54.5	N	161.	W		60			7.5 BDA					012		1
BDA	1948	09	08	15	09	11.	21.	S	174.	W		60			7.9 BDA					173		12
BDA	1949	03	04	10	19	25.	36.	N	70.5	E		230			7.5 BDA					718		53
BDA	1949	07	10	03	53	36.	39.	N	70.5	E		60			7.6 BDA					715		48
BDA	1949	08	06	00	35	37.	18.5	S	174.5	W		70			7.5 BDA					173		12
BDA	1949	08	22	04	01	11.	53.8	N	133.3	W		60			8.1 BDA					022		2
WDS	1949	11	22	00	51	30.	29.	S	178.	W		100			7.5 WDS					178		T
BDA	1949	12	17	06	53	30.	54.	S	71.	W		60			7.75 BDA					144		9
BDA	1949	12	17	15	07	55.	54.	S	71.	W		60			7.75 BDA					144		9
BDA	1950	02	28	10	20	57.	46.	N	144.	E		340			7.9 BDA					663		51
BDA	1950	08	15	14	09	30.	28.5	N	96.5	E		60			8.7 BDA					313		26
BDA	1950	10	05	16	09	31.	11.	N	85.	W		60			7.7 BDA					075		6
BDA	1950	10	08	03	23	09.	3.8	S	128.3	E		60			7.6 BDA					272		23
BDA	1950	11	02	15	27	56.	6.5	S	129.5	E		60			8.1 BDA					280		24
BDA	1950	12	02	19	51	49.	18.3	S	167.5	E		60			8.1 BDA					186		14
BDA	1950	12	09	21	38	48.	23.5	S	67.5	W		100			8.3 BDA					127		8
WDS	1950	12	10	13	23	12.	28.5	S	179.	W		300			7.8 WDS					177		6
BDA	1950	12	14	01	52	49.	19.3	S	175.8	W		200			7.9 BDA					173		12
WDS	1951	03	23	21	38	54.	31.	S	180.	E		300			7.6 WDS					177		6
BDA	1951	11	18	09	35	47.	30.5	N	91.	E		60			7.9 BDA					306		26
BDA	1951	12	08	04	14	12.	34.	S	57.	E		60			7.9 BDA					425		33
BDA	1952	03	04	01	22	43.	42.5	N	143.	E		60			8.6 BDA					224		19
BDA	1952	03	19	10	57	12.	9.5	N	127.3	E		60			7.9 BDA					248		22
BDA	1952	07	21	11	52	14.	35.	N	119.	W		60			7.7 BDA					039		3
BDA	1952	08	17	16	02	07.	30.5	N	91.5	E		60			7.5 BDA					306		26
BDA	1952	11	04	16	58	26.	52.8	N	159.5	E		60			8.4 BDA					219		19
KRK	1953	03	18	19	06	13.	40.1	N	27.3	E		10			7.5 KRK			XI		366		A
BDA	1953	04	23	16	24	17.	4.	S	154.	E		60			7.5 BDA					193		15
PDE	1953	05	06	17	16	43.	36.5	S	73.	W		60			7.6 PAS					135	C	
BDA	1953	07	02	06	56	58.	19.5	S	169.5	E		250			7.5 BDA					186		14
BDA	1953	11	25	17	48	52.	34.	N	141.5	W		40			8. BDA					611		39
ISS	1953	11	25	17	48	54.	33.9	N	141.5	E		33			8.25 PAS				T	229	C	
ISS	1953	12	12	17	31	25.	3.4	S	80.6	W					7.75 PAS			VII	T	110	C	
BDA	1955	02	27	20	43	25.	28.	S	175.5	W		60			7.8 BDA					177		12
BDA	1955	03	31	18	17	03.	8.	N	124.	E		60			7.6 BDA					259		22
LEE	1955	04	14	01	29	02.	30.	N	101.8	E					7.5 LEE			IX		307		
BDA	1956	05	23	20	48	28.	15.	S	179.	W		430			7.5 BDA					181		13
ISS	1956	06	09	23	13	51.	35.1	N	67.5	E					7.6 PAS					718	C	
BDA	1956	07	09	03	11	40.	37.	N	26.	E		60			7.8 BDA					369		30
BDA	1956	07	18	06	19	35.	5.5	S	130.	E		190			7.5 BDA					280		24
PDE	1956	10	11	02	24	33.	46.	N	150.5	E		110			7.6 PAS					221	F	
USE	1957	03	09	14	22	27.5	51.3	N	175.8	W					8.3 PAS			VIII	T V	007	D	

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE			TIME			LOCATION				DEPTH	MAGNITUDES				INT	INT					F-E	CE	Q/N
	YR	MO	DY	HR	MN	SEC	LATITUDE		LONGITUDE		KM	Mb	Ms	OTHER	LOCAL	MAP	MAX	D	T	S	V	N	W	U	I			
PDE	1957	04	14	19	17	57.	15.5	S	173.	W				7.5	PAS											173	F	
ISS	1957	04	16	04	04	03.	4.6	S	107.1	E	546			7.5	PAS											275		
PDE	1957	06	22	23	50	23.	1.5	S	137.	E				7.5	PAS											197	D	
BDA	1957	06	27	00	09	28.	56.5	N	116.	E	60			7.9	BDA											328		28
BDA	1957	07	28	08	40	04.	17.	N	99.	W	60			7.9	BDA											059		5
BDA	1957	09	24	08	21	05.	5.5	N	127.5	E	60			7.6	BDA											248		22
BDA	1957	09	28	14	20		20.5	S	178.	W	600			7.5	BDA											181		12
BDA	1957	11	29	22	19	38.	21.	S	66.	W	170			7.8	BDA											125		8
BCI	1957	12	04	03	37	44.	45.25	N	99.4	E				8.3	PAS		X									334	C	
BDA	1957	12	17	13	50	12.	12.5	S	166.5	E	140			7.5	BDA											184		14
ISS	1958	01	19	14	07	26.	1.3	N	79.3	W				7.8	PAS				T							105	C	
BDA	1958	03	11	00	25	56.	25.5	N	125.	E	70			7.5	BDA											246		21
BDA	1958	07	10	06	15	51.	58.6	N	137.1	W	60			7.9	BDA											019		2
BDA	1958	07	26	17	37	09.	13.5	S	69.	W	620			7.5	BDA											118		8
BDA	1958	11	06	22	58	06.	44.5	N	148.5	E	75			8.7	BDA											221		19
ISS	1959	04	26	20	40	37.	24.8	N	122.7	E	113			7.5	PAS											243	C	
BDA	1959	05	04	07	15	42.	52.5	N	159.5	E	60			8.25	BDA											219		19
BDA	1959	06	14	00	11	57.	20.5	S	68.	W	100			7.5	BDA											124		8
BDA	1959	09	14	14	09	39.	28.5	S	177.	W	60			7.7	BDA											177		12
BDA	1960	01	13	15	40	34.	16.	S	72.	W	200			8.	BDA											115		8
BDA	1960	05	22	19	11	17.	39.5	S	74.5	W	60			8.3	BDA											134		8
BDA	1961	08	31	01	57	08.	10.5	S	70.7	W	629			7.5	BDA											112		8
PDE	1961	09	01	00	09	34.6	59.5	S	27.3	W	131			7.5	PAS											153		
PDE	1961	09	08	11	26	32.9	56.3	S	27.1	W	125			7.63	PAS											153		
USE	1963	08	15	17	25	05.9	13.8	S	69.3	W	543	6.		7.75	PAS											118		052
USE	1963	10	13	05	17	57.1	44.8	N	149.5	E	60			8.25	PAS				T							221	F	075
BDA	1964	03	28	03	36	13.	61.1	N	147.6	W	20			8.5	BDA											002		1
BDA	1964	06	23	01	26	37.	43.3	N	146.1	E	77			7.6	BDA											221		19
BDA	1964	11	17	08	15	39.	5.7	S	150.7	E	45			7.6	BDA											192		15
BDA	1965	01	24	00	11	12.1	2.4	S	126.	E	6			7.6	BDA											270		
USE	1965	02	04	04	53	57.7	51.1	N	178.4	E	40	5.8		7.75	PAS				T							006	D	037
BDA	1965	02	04	05	01	21.8	51.3	N	178.6	E	40			8.1	BDA											006		
USE	1965	03	14	15	53	06.6	36.3	N	70.7	E	219	6.6		7.5	PAS											718	C	054
BDA	1965	03	30	02	27	07.2	50.6	N	177.9	E	51			7.5	BDA											006		
BDA	1965	08	23	19	46	02.9	16.3	N	95.8	W	28			7.8	BDA											060		
USE	1966	03	12	16	31	20.6	24.2	N	122.6	E	48	6.6		7.63	PAS											243	C	169
BDA	1966	03	22	08	19	33.8	37.5	N	115.1	E	33			7.6	BDA											658		
BDA	1966	06	15	00	59	45.8	10.4	S	160.8	E	31			7.8	BDA											193		
BDA	1966	10	17	21	41	56.3	10.7	S	78.7	W	38			8.	BDA											115		
USE	1966	12	28	08	18	06.1	25.5	S	70.7	W	32	6.8		7.75	PAS				T							122		181
BDA	1966	12	31	18	23	03.9	11.8	S	166.5	E	33			8.2	BDA											184		
BDA	1967	01	05	00	14	40.4	48.1	N	102.8	E	33			7.6	BDA											334		
BDA	1967	12	21	02	25	21.6	21.8	S	70.	W	33			7.5	BDA											122		
BDA	1968	04	01	00	42	04.2	32.5	N	132.2	E	33			8.	BDA											236		
PDE	1968	05	16	00	48	55.4	40.84	N	143.222	E	7		7.9						T							229	C	115
BDA	1968	05	16	10	39	01.6	41.5	N	142.7	E	33			8.	BDA											224		
BDA	1968	05	23	17	24	15.7	41.7	S	171.9	E	21			7.5	BDA											162		
BDA	1968	05	28	13	27	18.7	2.9	S	139.3	E	65			7.7	BDA											197		
BDA	1968	06	12	13	41	50.7	39.5	N	142.7	E	44			7.8	BDA											228		
WDS	1968	07	25	07	23	07.8	30.77	S	178.35	W	60			7.7	WDS											178		12
BDA	1968	08	01	20	19	21.9	16.5	N	122.2	E	37			7.7	BDA											249		
BDA	1968	08	02	14	06	43.9	16.6	N	97.7	W	40			7.5	BDA											060		
BDA	1968	08	10	02	07	04.3	1.4	N	126.2	E	33			7.9	BDA											266		
BDA	1968	08	14	22	14	19.4	0.2	N	119.8	E	23			7.5	BDA											265		
PDE	1968	10	07	19	20	20.3	26.288	N	140.595	E	516D	6.1		7.5	PAS		V									212	F	67
BDA	1968	10	23	21	04	41.3	3.3	S	143.3	E	12			7.5	BDA											200		
PDE	1969	01	05	13	26	39.9	7.975	S	158.909	E	47	6.4	7.1	7.5	PAS											193	D	95
BDA	1969	01	30	10	29	40.4	4.8	N	127.4	E	70			7.9	BDA											263		
BDA	1969	02	28	02	40	32.5	36.	N	10.6	W	22			7.9	BDA											402		
BDA	1969	07	18	05	24	48.	38.3	N	119.4	E	33			7.8	BDA											658		

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE YR	MO	DY	TIME HR	MN	SEC	LOCATION LATITUDE		LONGITUDE		DEPTH KM	MAGNITUDES Mb	Ms	OTHER	LOCAL	INT MAP	INT MAX	DTSVNWUI	F-E	CE	Q/N
BDA	1969	08	11	21	27	39.4	43.5	N	147.4	E	28			8.1 BDA							
BDA	1969	11	21	02	05	35.3	2.1	N	94.6	E	20			7.8 BDA					221		
BDA	1969	11	22	23	09	37.2	57.8	N	163.5	E	33			7.6 BDA					705		
LEE	1970	01	04	17	00	37.	24.2	N	102.68	E	13			7.7 LEE					218		
BDA	1970	01	10	12	07	08.6	6.8	N	126.7	E	73			7.6 BDA			XI		318		
																			259		
BDA	1970	04	07	05	34	05.6	15.8	N	121.7	E	37			7.7 BDA							
BDA	1970	05	31	20	23	27.3	9.2	S	78.8	W	43			7.7 BDA					249		
BDA	1970	06	05	04	53	06.4	42.5	N	78.8	E	20			7.5 BDA					109		
BDA	1970	06	11	16	46	38.3	59.1	S	157.8	E	33			7.6 BDA					330		
BDA	1970	06	24	13	09	08.3	51.8	N	131.	W	12			7.5 BDA					167		
																			022		
PDE	1970	08	11	10	22	20.	14.123	S	166.65	E	33N	6.2	7.	7.5 BRK			IV		186	F	55
BDA	1970	12	10	04	34	38.8	4.	S	80.7	W	25			7.6 BDA					110		
BDA	1971	01	10	07	17	03.7	3.1	S	139.7	E	33			8.2 BDA					201		
BDA	1971	07	09	03	03	18.7	32.5	S	71.2	W	58			7.9 BDA					135		
BDA	1971	07	14	06	11	29.1	5.5	S	153.9	E	47			8.1 BDA					190		
BDA	1971	07	26	01	23	21.3	4.9	S	153.2	E	48										
PDE	1971	07	27	02	02	49.6	2.748	S	77.429	W	135D	6.3		8. BDA					190		
BDA	1971	09	05	18	35	25.	46.5	N	141.2	E	9			7.5 PAS					110	C	153
PDE	1971	11	24	19	35	29.1	52.897	N	159.187	E	106	6.3		7.7 BDA					662		
BDA	1971	12	15	08	29	55.3	56.	N	163.3	E	33			7.5 BRK					219	F	111
														7.8 BDA					218		
BDA	1972	01	04	03	16	54.5	22.6	N	122.1	E	33										
LEE	1972	01	25	02	06	23.	22.56	N	122.37	E	29			7.6 BDA					243		
BDA	1972	01	25	03	41	23.7	23.	N	122.2	E	33			7.5 LEE					243		
BDA	1972	02	29	09	22	59.8	33.3	N	140.8	E	56			7.7 BDA					243		
BDA	1972	04	24	09	57	21.7	23.6	N	121.6	E	33			7.7 BDA					211		
														7.7 BDA					244		
BDA	1972	04	25	19	30	09.3	13.4	N	120.3	E	50										
BDA	1972	06	11	16	41	00.9	3.9	N	124.3	E	325			8. BDA							
BDA	1972	07	30	21	45	14.1	56.8	N	135.7	W	25			7.7 BDA					250		
BDA	1972	11	02	19	55	22.1	20.	S	168.8	E	32			7.9 BDA					262		
BDA	1972	12	02	00	19	47.2	6.5	N	126.6	E	33			7.5 BDA					019		
														8. BDA					188		
BDA	1972	12	04	10	16	12.	33.3	N	140.7	E	66								259		
BDA	1973	01	30	21	01	12.5	18.5	N	103.	W	43			7.7 BDA							
LEE	1973	02	06	10	37	08.3	31.3	N	100.9	E	17			7.8 BDA					211		
BDA	1973	02	28	06	37	49.5	50.5	N	156.6	E	27			7.9 LEE					056		
BDA	1973	03	17	08	30	51.8	13.4	N	122.8	E	33			7.8 BDA			X		307		
														7.8 BDA					221		
BDA	1973	06	17	03	55	02.9	43.2	N	145.8	E	48								249		
BDA	1973	06	24	02	43	25.5	43.3	N	146.4	E	50			8. BDA							
BDA	1973	07	14	04	51	21.	35.2	N	86.5	E	33			7.8 BDA					224		
PDE	1973	10	06	15	07	37.3	60.823	S	21.549	W	33N	6.2	7.	7.5 BDA					221		
PDE	1973	10	27	06	59	57.4	70.779	N	54.177	E	0G	6.9	5.5	7.5 PAS					306		
														7.6 PAS					156		49
BDA	1973	12	28	13	41	45.8	14.5	S	166.6	E	26							E	648		221
BDA	1974	07	04	19	30	42.1	45.1	N	94.	E	33			7.7 BDA							
BDA	1974	10	03	14	21	29.1	12.3	S	77.8	W	13			7.5 BDA					186		
PDE	1974	10	08	09	50	58.1	17.3	N	62.	W	47	6.6	7.5	7.8 BDA					334		
PDE	1975	02	02	08	43	39.1	53.113	N	173.497	E	10	6.1	7.6	7.1 PAS					X 115		
														7.5 PAS		VIII			X 092	D	186
BDA	1975	02	04	11	36	07.5	40.6	N	122.6	E	33					IX			X 005	C	205
BDA	1975	05	10	14	27	38.7	38.2	S	73.2	W	6			7.6 BDA							
BDA	1975	05	26	09	11	51.5	36.	N	17.6	W	33			7.7 BDA					658		
BDA	1975	07	20	14	37	39.9	6.6	S	155.1	E	49			7.8 BDA					X 135		
PDE	1975	07	20	19	54	27.7	7.104	S	155.152	E	44	6.1	7.7	7.5 BDA					X 402		
														7.4 PAS					X 193		
BDA	1975	10	11	14	35	15.	24.9	S	175.1	W	9					VII			193	F	141
BDA	1975	10	31	08	28	02.6	12.5	N	126.	E	50			7.8 BDA							
BDA	1975	12	26	15	56	38.7	16.3	S	172.5	W	33			7.8 BDA					X 175		
BDA	1976	01	14	15	56	34.9	29.2	S	177.9	W	69			7.6 BDA					248		
BDA	1976	01	14	16	47	33.5	28.4	S	177.7	W	33			8. BDA					X 169		
														7.8 BDA					X 178		
PDE	1976	02	04	09	01	43.4	15.324	N	89.101	W	5G	6.2	7.5	7.5 PAS					X 177		
BDA	1976	05	29	12	23	18.7	24.6	N	99.	E	8			7.5 BDA		IX	FT		X 070	C	214
BDA	1976	07	27	19	42	54.6	39.6	N	118.	E	23			8.1 BDA					318		
BDA	1976	07	28	10	45	35.2	39.7	N	118.4	E	26			7.6 BDA					X 658		
PDE	1976	08	16	16	11	07.3	6.262	N	124.023	E	33N	6.4	7.9	7.9 BRK					658		
																VI	TS		X 259	C	231

Table 3. Summary of Earthquakes of Magnitude 7.5 or Larger (Cont.)
[For explanation of headings and abbreviations used in table, see appendix 3.]

SEARCH OF ENTIRE EDF FILE FOR MAG 7.5+

SOURCE	DATE YR	MO	DY	TIME HR	MN	SEC	LOCATION LATITUDE	LONGITUDE	DEPTH KM	MAGNITUDES Mb	Ms	OTHER	LOCAL	INT MAP	INT MAX	DTSVNWUI	F-E	CE	Q/N
BDA	1977	03	18	21	43	52.4	16.8 N	122.3 E	37			7.5 BDA					249		
BDA	1977	04	02	07	15	22.7	16.7 S	172.1 W	33			7.6 BDA					X 169		
BDA	1977	04	20	23	42	50.5	9.9 S	160.3 E	19			7.5 BDA					X 193		
PDE	1977	04	20	23	49	13.1	9.844S	160.822E	33N	6.8	7.5						193	C	38
PDE	1977	04	21	04	24	09.6	9.965S	160.731E	33N	6.6	7.5	8.1 PAS			VII	T	X 193	C	176
BDA	1977	06	22	12	08	33.4	22.9 S	175.9 W	65			7.9 BDA					174		
BDA	1977	08	19	06	08	55.2	11.1 S	118.5 E	33			8.3 BDA					X 291		
BDA	1977	11	23	09	26	24.7	31. S	67.8 W	13			7.6 BDA					137		
PDE	1978	02	09	21	35	12.7	30.683S	177.358W	33N	5.7	7.2	7.7 BRK					178		72
PDE	1978	03	23	03	15	20.3	44.932N	148.439E	33N	6.4	7.5	7.3 BRK			VI	T	221	F	113
PDE	1978	03	24	19	47	50.7	44.244N	148.862E	33N	6.5	7.6	7.5 PAS			VI	T	221	F	317
PDE	1978	06	12	08	14	26.4	38.19 N	142.028E	44	6.8	7.7	7.5 PAS			VIII		X 228	C	294
PDE	1978	07	24	23	54	44.7	22.135N	121.437E	18D	5.	8.						243		89
PDE	1978	09	16	15	35	56.6	33.386N	57.434E	33N	6.5	7.4	7.8 BRK					X 348	C	197
PDE	1978	11	29	19	52	47.6	16.01 N	96.591W	18D	6.4	7.7	7.9 BRK					X 060	C	342
PDE	1978	12	06	14	02	01.	44.592N	146.581E	91	6.7		7.5 PAS			VIII		221	D	313
PDE	1979	03	14	11	07	16.3	17.813N	101.276W	49	6.5	7.6	7.6 BRK					X 058	C	262
PDE	1979	09	12	05	17	51.4	1.679S	136.04 E	5G	6.3	7.9	7.9 BRK				T	X 196	C	175
PDE	1979	10	12	10	25	22.3	46.675S	165.707E	33N	6.1	7.4	7.5 BRK					161	F	88
PDE	1979	11	27	17	10	32.9	33.962N	59.726E	10G	6.1	7.1	7.5 BRK					348	C	230
PDE	1979	12	12	07	59	03.3	1.598N	79.358W	24D	6.4	7.7	7.7 BRK				T	X 105	C	205
PDE	1980	07	08	23	19	19.8	12.41 S	166.381E	33N	5.9	7.5	7.8 BRK					X 184	F	170
PDE	1980	07	17	19	42	23.2	12.525S	165.916E	33N	5.8	7.9	8. BRK				T	X 184	F	95
PDE	1980	10	10	12	25	23.5	36.195N	1.354E	10G	6.5	7.3	7.7 BRK				F	X 396	C	203
PDE	1981	05	25	05	25	14.4	48.786S	164.357E	33N	6.1	7.6	7.6 BRK		FPS			X 161	F	199
PDE	1981	09	01	09	29	31.5	14.96 S	173.085W	25G	7.	7.7	7.9 BRK		FPS	VI	T	X 169	F	248
PDE	1981	10	16	03	25	42.2	33.134S	73.074W	33N	6.2	7.2	7.5 BRK		FPS	VI		134	C	161
PDE	1981	12	19	14	10	50.7	39.243N	25.227E	10G	6.2	7.2	7.6 PAS		FPS			365	D	218
PDE	1982	08	05	20	32	52.9	12.597S	165.931E	31	6.2	7.1	7.5 BRK		FPS			184		165
PDE	1982	12	19	17	43	54.8	24.133S	175.864W	33N	5.9	7.7	7.4 BRK		FPS			X 175		104
PDE	1983	03	18	09	05	50.	4.883S	153.581E	89	6.5	7.6	7.9 BRK		FPS	VII	T	MX 190	D	334
PDE	1983	05	26	02	59	59.6	40.462N	139.102E	24	6.8	7.7	7.8 PAL		FPS	VIII	T	X 226	C	481
PDE	1983	11	30	17	46	00.6	6.852S	72.11 E	10G	6.6	7.6	7.7 BRK			VI	T	426	D	402
PDE	1984	02	07	21	33	21.4	10.012S	160.469E	18D	6.6	7.5	7.7 PAL		FPS	VI		SX 193	D	318
PDE	1985	03	03	22	47	07.2	33.135S	71.871W	33N	6.7	7.8	7.50 BRK		FPS	VIII	UT	M 135	C	146
PDE	1985	04	09	01	56	59.4	34.131S	71.618W	38D	6.3	7.2	7.50 BRK		FPS	VI		135	C	356

Table 4. Printout Showing Format of Computer Retrieval from Earthquake Data Base
[See appendix 3 for description of column headings]

J. COFFMAN, NATIONAL GEOPHYSICAL DATA CENTER

09/20/85 10:25:30

RADIAL SEARCH--NORTHEASTERN CALIFORNIA

NOAA EARTHQUAKE DATA FILE

Dup	Source	Date yr	mo	dy	Time hr	mn	sec		Location Latitude deg		Longitude deg		Depth km	Magnitudes mb	MS	Other		Local			Int Map	Int Max	DTSVNWUI	F-E	CE	Q/N	Distance km
	USN	1867	12	02	07	12			39.3	N	121.	W										VI				48
	USN	1869	12	27	10				39.2	N	121.6	W										VI		036	H	48
	USN	1871	03	02				X	39.3	N	121.6	W										VII		036	H	31
	EQH	1888	04	29	04	48		Z	39.5	N	121.	W										VII		036	H	41
1***	USN	1892	04	21	17	43		Z	38.5	N	122.	W										VII		036	D	66
	EQH	1902	05	19	18	31		Z	38.5	N	122.	W										IX		036	D	76
1***	USN	1902	05	19	18	31			38.5	N	122.	W										IX		036	G	76
	EQH	1903	07	24	20	26		Z	39.5	N	122.	W										VIII		036	D	76
1***	USN	1903	07	24	20	26			39.5	N	122.2	W										VII		036	G	76
	EQH	1909	06	23	07	34		Z	39.5	N	121.	W										VII		036	D	79
1***	USN	1909	06	23	07	34			39.5	N	121.	W										VII		036	G	92
	EQH	1918	03	12	10	30		X	39.5	N	121.	W										VII		036	D	66
1***	USN	1918	03	12	10	30			39.5	N	121.	W										VII		036	H	66
	USN	1940	02	08	08	05	59.		39.7	N	121.2	W										VII		036	D	66
	BRK	1943	03	30	21	07	28.	B	39.43	N	120.4	W				6.	PAS					VI		036	H	66
1***	USN	1943	03	30	21	07	30.		39.4	N	120.4	W						5.3	ML	BRK		VII		036	D	81
	BRK	1946	03	05	14	04	27.	B	38.7	N	120.3	W				5.3	BRK							036	F	C	97
	BRK	1949	11	30	08	31	54.	B	38.62	N	122.13	W										V		036	C	96
	USN	1966	05	24	03	49	52.8		39.7	N	121.9	W	24	5.				4.1	ML	BRK				036	F	C	98
1***	BRK	1966	05	24	03	49	55.8	B	39.78	N	121.77	W		4.5				4.	ML	BRK				036	F	B	77
	USN	1966	09	22	08	44	17.7		39.5	N	120.5	W	33	4.8								VI		036	C	92
	BRK	1967	02	03	15	35	08.6	B	39.53	N	122.15	W		4.				4.6	ML	BRK	USE	VI		036	D	026	95
1***	USN	1967	02	03	15	35	08.6		39.5	N	122.	W	13	4.								VI		036	C	95
	USN	1968	04	29	00	21	36.6		39.5	N	122.1	W	15	5.				3.4	ML	BRK				036	011	91
1***	BRK	1968	04	29	00	21	38.6	B	39.54	N	122.02	W		5.								V		036	A	79
	BRK	1969	05	08	22	10	53.1	B	38.7	N	122.17	W										VI		036	A	85
	BRK	1970	07	01	07	55	26.3	B	39.48	N	122.07	W						4.7	ML	BRK				036	F	060	84
1***	USN	1970	07	01	07	55	26.3		39.5	N	122.	W		4.3				4.	ML	BRK				036	F	007	76
	PDE	1973	09	17	02	08	54.1	B	38.6	N	122.152	W	12	4.3				3.6	ML	BRK				036	D	016	82
1***	USN	1973	09	17	02	08	54.1		38.6	N	122.2	W	2	4.2								V		036	A	79
	PDE	1975	08	01	20	20	04.8	B	39.439	N	121.528	W	2	4.2				4.7	ML	BRK				036	F	17	80
1***	PDE	1975	08	01	20	20	12.9	B	39.439	N	121.528	W	8	4.4	5.7							V		036	A	83
	PDE	1975	08	02	20	22	16.3	B	39.445	N	121.463	W	15	5.8	5.6			4.5	ML	BRK				036	F	48	53
	PDE	1975	08	02	20	59	02.7	*	39.406	N	121.711	W	4	5.3	4.5			5.7	ML	BRK		VII	F	036	D	221	53
	PDE	1975	08	03	01	03	05.8	B	39.488	N	121.518	W	5G	5.2	4.7			5.1	ML	BRK				036	F	129	52
	PDE	1975	08	06	16	41	52.1	B	39.497	N	121.529	W	8	5.				5.1	ML	BRK				036	D	124	56
	PDE	1975	08	08	07	00	50.1	B	39.502	N	121.512	W	8	5.2				4.6	ML	BRK				036	F	37	58
	PDE	1976	07	06	03	55	16.2		39.399	N	121.601	W	8	5.				3.6	ML	BRK				036		18	59
	PDE	1978	09	08	16	59	47.7	B	38.669	N	121.905	W	5G	4.5				4.9	ML	BRK				036	F	73	59
	PDE	1980	11	28	18	21	13.1	B	39.305	N	120.428	W	18	4.4				4.1	ML	BRK	PDE	V		036	F	19	51
													5	4.9				4.2	ML	BRK		V		036	F	16	58
																		5.2	ML	BRK				036	D	69	89

N*** before a record means it is a possible duplicate.

Table 5. Major Sources of Data in Earthquake Data Base
[See appendix 4 for explanation of codes under "Sources" column.]

SOURCES	FIRST YEAR*	LAST YEAR	NUMBER OF RECORDS
ANK	11	1975	3,621
BCI	1950	1961	3,701
BDA	1897	1977	1,490
BRG	1962	1976	3,630
BRK	1910	1974	9,430
CCN	1969	1983	68,484
DMG	1900	1974	39,578
EPB	1568	1980	11,924
EQH	1638	1969	600
ERE	1969	1973	9,665
FEN	1891	1976	1,894
FRG	1021	1982	1,532
G-R	1904	1952	4,039
HVO	1961	1976	31,161
ISS	1918	1959	16,452
KRK	-2100	1970	13,256
LDO	1973	1984	4,908
LEE	-1177	1976	1,145
OSU	1853	1973	2,220
OWN	1811	1975	1,112
PAS	1932	1974	15,200
PDE	1928	1984	145,062
SSR	-2000	1980	85,425
STA	1964	1966	2,141
STO	1568	1981	5,147
SYK	1950	1960	1,167
T-A	1769	1927	4,166
TRI	2	1971	10,591
USE	1927	1970	1,371
USN	1534	1974	30,607
WDS	1460	1977	16,899
ZUR	1021	1971	2,431

*Minus sign (-) indicates pre-Christian era (B.C.).

APPENDIX 1
DATA FORMAT FOR MAGNETIC TAPE

Tape Position	Field	Comments
1-3	Data source (see appendix 4)	Source from which all or most of the data were obtained.
4	B.C. date indicator	Minus sign indicates pre-Christian era.
4-12	Date (Universal Time--UT)	Positions 4-8 year, 9-10 month, and 11-12 day.
13-19	Origin time (Universal Time--UT)	Computed, or observed if controlled explosion with shot timed. Positions 13-14 hour, 15-16 minute, and 17-19 second. Implied decimal between positions 18 and 19.
20-24	Geographic latitude (decimal degrees)	Usually given to three decimal places, although this degree of accuracy is not necessarily applicable. Implied decimal between positions 21 and 22.
25	N/S	North or south latitude.
26-31	Geographic longitude (decimal degrees)	Usually given to three decimal places. Implied decimal between positions 28 and 29.
32	E/W	East or west longitude.
33-35	Focal depth (km)	See also position 68.
36-38	Body-wave (M_B) average value	Implied decimal between positions 36 and 37. Value as determined by *PDE program.
39-40	M_B	If magnitude in 36-38 is given.
41-43	Isoseismal map, fault plane solution, or both	Three-letter abbreviation indicating the publication of an isoseismal (intensity) map. USE, United States Earthquakes; *PDE, Preliminary Determination of Epicenters; WEL, New Zealand Seismology Report, Wellington, N.Z.; BSS, Bulletin of the Seismological Society of America; ZUR, Zurich, Switzerland; NTR, Nature magazine. FPS indicates a fault-plane solution was computed. BOT means that both a fault plane solution and an isoseismal map were produced by U.S. Geological Survey.

*PDE (Preliminary Determination of Epicenters) is a program operated by the USGS.

Tape Position	Field	Comments
44	Maximum intensity	Modified Mercalli Scale or converted to MM Scale. 1-9 = I-IX, X = X, E = XI, T = XII. See appendix 5.
45-50	Associated Phenomena	
45	Diastrophism code	F = Surface faulting. U = Uplift/subsidence. D = Faulting and uplift/subsidence.
46	Tsunami code	T = Tsunami generated. Q = Possible tsunami.
47	Seiche code	S = Seiche. Q = Possible seiche.
48	Volcanism code	V = Earthquake associated with volcanism.
49	Nontectonic code	R = Rockburst. C = Coal bump or rockburst in coal mine. M = Meteoritic source. E = Explosion--accidental, controlled, or suspected. I = Collapse. L = Lights or other such visual phenomena seen.
50	Waves generated code	T = T-wave. A = Acoustic wave. G = Gravity wave. B = Both A and G.
51-53	Flinn-Engdahl geographic region no.	As described by Flinn and others (1974). See appendix 6.
54-55	Surface-wave (M_S) average value	Implied decimal between positions 54 and 55. Value determined by PDE program. (IASPEI formula used.)
56-57	M_S	If magnitude in 54-55 is given.
58	Component Z or H	Z = M_S computed from long-period vertical component. H = M_S computed from long-period horizontal component.
59	Cultural effects	C, D, F, or H in position 59 indicates reported casualties, damage, felt information, or earthquake heard, respectively. The notations listed here provide a brief summary of the earthquake effects on populations and

Tape Position	Field	Comments
59 (cont.)	Cultural effects (cont.)	buildings. Casualty, damage, or felt reports associated with a particular earthquake do not imply that the effects were noted at the epicentral position. Especially with offshore earthquakes, the maximum intensity may be reported at some distance from the source of the shock. An "F" in this position (felt but no damage reported) having no accompanying intensity (position 44) is likely associated with an intensity of I-III on the Modified Mercalli Scale; however, the actual intensity may be higher.
60	Unusual Events	L = Liquefaction. G = Geyser/fumerol. S = Landsliding, avalanche. B = Sand blows. C = Ground cracking, not associated with faulting. V = Visual phenomena or lights. O = Olfactory phenomena. M = More than one of the above.
61-63	Other magnitude	Value obtained from several sources; unspecified magnitude type but generally M_S (implied decimal between positions 61 and 62). Fractions have been converted to decimal numbers, or are encoded as follows: 6 - 6-1/4 = 6.13 6-1/4 = 6.25 6-1/4 - 6-1/2 = 6.38 6-1/2 = 6.50 6-1/2 - 6-3/4 = 6.63 6-3/4 = 6.75 6-3/4 - 7 = 6.88 For any other range, median values are listed.
64-66	Authority for magnitude in positions 61-63	See source codes in appendix 4.
67	Special event designator	X = International Data Exchange (IDE) earthquake.
68	Depth control designator	A = Assigned. D = Restrained depth based on 2 or more reported pP's identified as such. G = Depth restrained by geophysicist.

Tape Position	Field	Comments
68 (cont.)	Depth control designator (cont.)	N = Held at 33 km (normal depth), where data not sensitive to depth for a shallow focus. S = Depth control aided by use of S-phase data. * = Less well-constrained free-depth solution; 90% confidence it lies within 8.5 and 16 km (used since January 1985). ? = Poorly constrained free depth solution (used since January 1985).
69-71	Number of stations/ Quality Indicators	Number of P and/or P' arrivals used in hypocenter solution.

Quality Indicators are as listed below:

Source	Style and Indicators	Probable Limits of Error		
		Epicenter (°)	Origin Time (s)	Depth (km)
G-R (Gutenberg-Richter, 1954)	3-letter combination			
	A = Very accurate	1	5	30
	B = Good	2	8	50
	C = Fair	3	12	80
	D = Poor	3	12	80

Source	Style and Indicators	
MOS (Moscow)	2-letter or letter/symbol combination in positions 69 and 71	A = Best accuracy (epicenter/depth). B = Very good. N = Good. V = Fair. * = Poor.
PAS (Pasadena)	Single-letter designator in position 69	A = Specially investigated. B = Epicenter probably within 5 km, origin time to nearest second. C = Epicenter probably within 15 km, origin time to a few seconds. D = Epicenter not known within 15 km, rough location.
BRK (Berkeley) & WEL (Wellington, N.Z.)	Single-letter designator in position 70	A = Accurate epicenter. B = Good. C = Fair. D = Poor.

Tape Position	Field	Comments
69-71 (cont.)	Quality Indicators (cont.):	

Source	Style and Indicators
USN (Algermissen; see Hays and others, 1975), STA (Algermissen, 1969), and STO (Stover and others, 1984)	Single-letter designator in position 69; letters are as follows: A - Instrumental epicenter assumed correct to 0.1°. B - Instrumental epicenter assumed correct from 0.1° to 0.2°. C - Instrumental epicenter assumed correct from 0.2° to 0.5°. D - Instrumental epicenter assumed correct from 0.5° to 0.1°. E - Instrumental epicenter assumed correct to 1.0°. F - Epicenter from felt data assumed correct to 0.5°. G - Epicenter from felt data assumed correct from 0.5° to 1.0°. H - Epicenter from felt data assumed correct from 1.0° to 2.0°. I - Epicenter from felt data assumed correct to 2.0°.

72	Authority for time and coordinates/other quality indicators	Blank = Authority same as source (positions 1-3) A = Parameters of explosion supplied by U.S. Atomic Energy Commission (AEC)/Energy Research and Development Administration (ERDA)/Department of Energy (DOE). B = Parameters of epicenter supplied by University of California, Berkeley. C = Parameters of epicenter supplied by Commission de Energie Atomique, Paris, France. D = Parameters and epicenters supplied by the Alaskan Branch, U.S. Geological Survey. E = Some or all parameters of explosion (controlled or accidental) supplied by any group or individual other than AEC/ERDA/DOE. F = Parameters of epicenter supplied by Geotech/University of Michigan. G = Parameters of epicenter supplied by the U.S. Geological Survey-NEIS for any area other than Island of Hawaii and Alaska. H = Parameters of epicenter supplied by the USGS Hawaii Volcano Observatory. I = Parameters of epicenter supplied by Tennessee Earthquake Information Center, Memphis. J = Parameters of epicenter supplied by Saint Louis University.

Tape Position	Field	Comments
72 (cont.)	Authority for time and coordinates/other quality indicators (cont.)	L = Parameters of epicenter supplied by Lamont-Doherty Geological Observatory, Palisades, NY. M = Hypocenter based on an microseismic information. N = Parameters of epicenter supplied by Northeastern Seismological Association, Weston, MA. O = Parameters of epicenter supplied by Earth Physics Branch, Ottawa, Ontario, or Pacific Geoscience Center, Sydney, British Columbia (Energy Mines & Resources, Canada). P = Parameters of epicenter supplied by California Institute of Technology, Pasadena. Q = University of South Carolina R = Parameters of epicenter supplied by University of Nevada, Reno. S = A USGS solution based on use of dense local networks, a local crustal model, or other methods not routinely applied by USGS. T = Parameters of epicenter supplied by Georgia Institute of Technology, Atlanta. U = Parameters of epicenter supplied by University of Utah, Salt Lake City. V = Parameters of epicenter supplied by Virginia Polytechnic Institute and State Univ., Blacksburg. W = Parameters of epicenter supplied by University of Washington, Seattle. X = No time reported. Y = Parameters of epicenter supplied by Oklahoma Geological Survey, Leonard (Tulsa). Z = Noninstrumental. - = Less reliable. * = Assigned to solutions for which poor azimuth, depth control, and other factors contribute to a less reliable source. % = Single network solution. ? = Poor solution.
73-75	Local magnitude	Implied decimal between positions 73 and 74.
76-77	Magnitude scale used	If magnitude in 73-75 is given. Generally M_L; USGS will use M_B. ML = Local magnitude MB = Body-wave magnitude

Tape Position	Field	Comments
76-77 (cont.)	Magnitude scale used (cont.)	CL = Coda-length magnitude MS = Surface-wave magnitude DR = Duration magnitude NU = Nuttli magnitude MW = Moment magnitude (Abe, 1983, 1984) MR = Rautian magnitude (Kondorskaya and Shebalin, 1982) LH Magnitude M_{LH} (Kondorskaya and Shebalin, 1982) LG = Lg body-wave magnitude (Nuttli, 1973) SL = Magnitude from Stover and others, 1984 SH = Magnitude from Stover and others, 1984 SA = Magnitude from Stover and others, 1984 SU = Magnitude of unknown origin from Stover and others, 1984 K = Reported magnitude of unknown origin MC = Reported magnitude of unknown origin MG = Reported magnitude of unknown origin
78-80	Authority for value in 73-75	See Codes for Data Sources in appendix 4.
81-85	Grid locator	The 1° grid locator is based on the formula: Grid Locator = East longitude * 180 + colatitude, where east longitude is the earthquake's position measured eastward from the Greenwich meridian 0°, and colatitude is its position measured from the North Pole 0°. The integer of these parameters is used. A possible 64,800 unique values exist.
86	Blank	Blank

APPENDIX 2
DATA FORMAT FOR PUNCHED CARDS

Card Column	Field*
1-3	Data source (see appendix 4)
4	Blank
5-12	Date (Universal Time--UT)
13-19	Origin Time (Universal Time--UT)
20-25	Geographic latitude
26-32	Geographic longitude
33-35	Focal depth (km)
36-38	Body-wave average value
39-40	m_b
41-43	Isoseismal or fault-plane solution map
44	Maximum intensity (appendix 5)
45-50	Associated Phenomena
45	Diastrophism code
46	Tsunami code
47	Seiche code
48	Volcanism code
49	Nontectonic code
50	Waves generated code
51-53	Flinn-Engdahl geographic region number (appendix 6)
54-55	Surface-wave average value
56-57	M_S
58	Component Z or H
59	Cultural effects
60	Geological effects
61-63	Other magnitude
64-66	Source for magnitude in columns 61-63
67	Special event designator
68	Depth control designator
69-71	Number of stations/Quality
72	Authority for time and coordinates/other quality indicators
73-75	Local magnitude
76-77	Generally M_L
78-80	Source for magnitude in columns 73-77

*First 80 characters are the same for punched cards and magnetic tapes.

APPENDIX 3
DATA FORMAT FOR PRINTOUT

Field	Description*
DUP	N*** before a records indicates it is a possible duplicate.
SOURCE	Data source (see appendix 4)
YR, MO, DY	Date (Universal time--UT)
HR, MN, SEC	Origin time (Universal time--UT). Letter or symbol following time represents quality and code for time and coordinates.
LATITUDE, LONGITUDE	Geographic latitude and longitude
DEPTH	A, assigned; D, restrained to agree with reported depth phases; G, restrained by geophysicist; N, restrained at normal depth (33 km).
MAGNITUDES	Body- and surface- (SURF.) wave values as determined by †PDE programs. Authority for other magnitudes and local magnitudes according to source codes (see appendix 4).
INT MAP	Intensity map published by: BSS, Bull. of the Seismological Society of America; EQN, Earthquake Notes; PDE, Preliminary Determination of Epicenters; USE, United States Earthquakes.
INT MAX	Maximum intensity (see appendix 5)
DTSVNWUI	Associated phenomena: D, Diastrophism; T, Tsunami; S, Seiche; V, volcanism; C, nontectonic; W, waves generated; U, Unusual events (L, liquefaction; G, geyser; S, slides or avalanche; B, sand blows; C, ground cracking; O, olfactory, M, more than one of these occurred); I, special event designator (X = International Data Exchange--IDE--event.
F-E	Flinn-Engdahl geographic region number (see appendix 6).
CE	Cultural effects: C, casualties; D, damage; F, felt.
Q/N	Quality/number of stations.
DISTANCE	On radius searches, the distance in kilometers between the earthquake location and the designated point.

*See Data Format for Magnetic Tape in appendix 1 for detailed description.

†PDE (Preliminary Determination of Epicenters) is a program operated by USGS.

APPENDIX 4
CODES FOR DATA SOURCES

AAM	Ann Arbor, MI, USA
ADK	Adak, AK, USA
*AEC	U.S. Atomic Energy Commission
AGI	Augustine Is., AK, USA
*AGS	Alaska Seismic Studies, USGS-NCER, Menlo Park, CA, USA
ALG	Algiers, Algeria
ALI	Alicante, Spain
ALM	Almeria, Spain
ALQ	Albuquerque, NM, USA
ANK	Ankara, Turkey
APA	Apatity, RSFSR, USSR
API	Apia, Samoa Is.
APT	Avery Point, CT, USA
AQU	Aquila, Italy
ATH	Athens Observatory, Greece
ATL	Atlanta, GA, USA
ATU	Athens University, Greece
*BAR	Barstow and others (1981, see Bibliography)
BAS	Basel, Switzerland
*BCI	Bureau Central International de Seismologie, Strasbourg, France
*BDA	M. Bath and S. Duda (1979, see Bibliography)
BJI	Beijing (Peking), PRC
BLA	Blacksburg, VA, USA
BLY	Banja Luka, Yugoslavia
BNS	Bensberg, FRG
BOG	Bogota, Colombia
BRA	Bratislava, Czechoslovakia
*BRG	Bureau de Recherches Geologiques et Minieres
BRK	Berkeley--Haviland, CA, USA
BSS	Bulletin of the Seismological Society of America
BUC	Bucharest, Rumania
BUL	Bulawayo, Rhodesia
CAN	Canberra, Australian Capital Territory, Australia
CAR	Caracas, Venezuela
*CCN	Central California Network (see U.S. Geological Survey, 1969-77, in Bibliography)
CEA	Ceahlau, Rumania
*CFR	Charles F. Richter (see Richter, 1958, in Bibliography)
CGS	Coast and Geodetic Survey, Rockville, MD
CHC	Chapel Hill, NC, USA
CHG	Chiang Mai, Thailand
CLL	Colimberg, GDR
CON	Concepcion, Chile
CSC	Columbia, SC, USA
CSM	Casamicciolo (Isola d'Ischia), Italy
CTA	Charters Towers, Queensland, Australia
DEW	Dewey, J.W. and Gordon, D.W. (1983, Unpublished Data)
DJA	Djakarta (Batavia), Java, Indonesia
DMG	California Division of Mines & Geology (see Real and others, 1978, in Bibliography)
DUI	Duronia, Italy
DWR	Dept. of Water Resources, CA, USA
EPB	Earth Physics Branch; Energy, Mines & Resources, Ottawa, Canada
*EQH	Earthquake History of the United States (see Coffman and others, 1982, in Bibliography)
EQN	Earthquake Notes
ERD	Erdek, Turkey
*ERE	E.R. Engdahl (see Bibliography)
*ERI	Earthquake Research Institute, Tokyo, Honshu, Japan
*ERL	Environmental Research Laboratories, Boulder, CO, USA
*FEN	Fennoscandia (see Bath, 1956, and Panasenko, 1977, in Bibliography)
FIR	Firenze Ximeniano (Florence), Italy
*FRG	Federal Republic of Germany
FUR	Furstenfeldbruck, FRG
GB	G. Bollinger (1979, see Bibliography)
G-R	Gutenberg-Richter (see Gutenberg and Richter, 1954, in Bibliography)
GIA	Geophysical Institute, University of Alaska, Fairbanks, AK, USA
GIB	Giblimanna, Sicily, Italy
GIL	Gilmore Creek, AK, USA
GOL	Golden (Bergen Park), CO, USA
GRC	Garchy, France
GRF	Graefenberg Array (Erlangen), FRG
GS	U.S. Geological Survey, Denver, CO, USA
HEL	Helsingfors (Helsinki), Finland
HFS	Hagfors, Sweden
HIG	Hawaii Institute of Geophysics, HI, USA
HRB	Hurbanovo (Ogyalla, Stara Dala), Czechoslovakia
HVO	Hawaiian Volcano Observatory (Kilauea), HI, USA
*ISC	International Seismological Centre, Newbury, UK
ISK	Instanbul-Kandilli, Turkey
*ISS	International Seismological Summary, Newbury, UK
IST	Instanbul, Turkey
JER	Jerusalem, Israel
JMA	Japan Meteorological Agency, Tokyo, Honshu, Japan
JOH	Johannesburg, South Africa
KAR	Karachi, Pakistan
KBN	Korca, Albania
KDC	Kodiak, AK, USA
KEW	Kew, England, USA
KIM	Kimberley, South Africa
KIR	Kiruna, Sweden
KOE	Koppel, FRG
KRA	Krakow, Poland
*KRK	V. Karnik (see Karnik, 1969, 1971, in Bibliography)
LAO	Lasa Array, MT, USA
LDG	Laboratoire de Detection et de Geophysique,
*LDO	Lamont-Doherty Geological Observatory, Palisades, NY, USA
*LDS	Lamont-Doherty Geological Observatory (New York State Network), Palisades, NY, USA
*LEE	W.H.K. Lee (see Lee and others, 1976, 1978, in Bibliography)
LEM	Lembang, Java, Indonesia
LGO	Shumagin Islands, Lamont-Doherty Geological Observatory
LIS	Lisbon, Portugal
LJU	Ljubljana (Laibach), Yugoslavia
LWI	Lwiro, Zaire
MAK	Makhachkala, RSFSR, USSR
MAL	Malaga, Spain
MAN	Manila (Dilliman), Luzon, Philippines
MAT	Matsushiro, Honshu, Japan
MER	Merida, Yucatan, Mexico
MES	Messina, Italy
MHI	Mashhad, Iran
MOS	Moscow, RSFSR, USSR
MOX	Moxa, GDR
MSO	Missoula, MT, USA

*These codes do not correspond to the international station codes of the same name.

*NCE	National Center for Earthquake Research (NCER), Menlo Park, CA, USA
NEN	Northeastern Seismological Association, Weston, MA, USA
NES	National Earthquake Information Center, Golden, CO, USA
NEW	Newport, WA, USA
NGN	Nagaro, Honshu, Japan
NMI	New Mexico Inst. of Mining and Technology, Socorro, NM, USA
NOS	National Ocean Survey, Rockville, MD, USA
NOU	Noumea, New Caledonia
NOV	Novara, Sicily, Italy
NRR	North Reno, NV, USA
OAX	Oaxaca, Oaxaca, Mexico
OBM	Ulan Bator, Mongolia
*OSU	Oregon State University (see Couch and others, 1974, in Bibliography)
OTT	Ottawa, Ontario, Canada
*OWN	O.W. Nuttli (see Nuttli, 1979, in Bibliography)
PAL	Palisades, NY, USA
PAS	Pasadena, CA, USA
*PDE	Preliminary Determination of Epicenters (see U.S. Geological Survey, in Bibliography)
PEK	Peking (Chiufeng), PRC
PET	Petropavlovsk, RSFSR, USSR
PGC	Pacific Geoscience Centre, Sidney, British Columbia, Canada
PHP	Peshkopi, Albania
PMG	Port Moresby, Papua-New Guinea
PMR	Palmer, AK, USA
PRA	Praha (Prague), Czechoslovakia
PRO	Pesaro, Italy
PRT	Prato, Italy
PRU	Pruhonice, Czechoslovakia
PWG	Pacific Geoscience Centre, Canada
QUE	Quetta, Pakistan
RAC	Raciborz, Poland
REY	Reykjavik, Iceland
RIV	Riverview, New South Wales, Australia
RMP	Rome (Monte Porzio Catone), Italy
*RO	Rogers and Malkiel (1979, see Bibliography)
ROM	Rome, Italy
SAL	Salo, Italy
SAN	Santiago, Chile
SDA	Shkodra, Albania
SEA	Seattle, WA, USA
SHI	Shiraz, Iran
SHL	Shillong, India
SKO	Skopje, Yugoslavia
SLC	Salt Lake City, UT, USA
SLM	St. Louis, MO, USA
SNM	Socorro, NM, USA
SRN	Saranda, Albania
*SSR	USSR Catalgue (see Kondorskaya and Shebalin, 1982, in Bibliography)
SSS	San Salvador, El Salvador
*ST	Street and Turcotte (1977, see Bibliography)
*STA	S.T. Algermissen (see Algermissen and others, 1969, in Bibliography)
STL	Santa Lucia, Chile
STO	Stover and others (1984, see Bibliography)
STR	Strasbourg, France
STU	Stuttgart, FRG
*SYK	Sykes (1963, 1965, 1966, see Bibliography)
*T-A	S.D. Townley and M.W. Allen (1939, see Bibliography)
TAC	Tacubaya, Mexico F.D., Mexico
TAG	James Taggart and Frank Baldwin (1982, see Bibliography)
TGG	James Taggart (1982, unpublished data)
TEH	Teheran, Iran
TEI	Tennessee Earthquake Information Center, TN, USA
TIR	Tirana, Albania
TOC	Tocklai, India
TOK	Tokyo, Honshu, Japan
TOL	Toledo, Spain
TRI	Trieste (Grotta Gigante), Italy
TRN	Trinidad, Trinidad - Tobago
TTG	Titograd, Yugoslavia
TUL	Oklahoma Geophysical Observatory, Oklahoma Geological Survey, University of Oklahoma, Leonard (Tulsa), OK, USA
UBC	University of British Columbia, Vancouver, British Columbia, Canada
UCC	Uccle, Belgium
UGL	Uglegorsk, RSFSR, USSR
UPP	Uppsala, Sweden
*USE	United States Earthquakes
*USN	US Network Catalog (see Mays and others, 1975, in Bibliography)
*UU	University of Utah (see Arabasz and others, 1979, in Bibliography)
VIC	Victoria, British Columbia, Canada
VIE	Vienna (Wien-Hohewarte), Austria
VKA	Vienna--Kobenzl, Austria
VLO	Vlora, Albania
WAR	Warsaw, Poland
WEL	Wellington, North Island, New Zealand
*WDS	W.D. Smith (1976, see Bibliography)
WES	Weston Observatory, Boston College, Boston, MA, USA
YSS	Yuzhno-Sakhalinsk, RSFSR, USSR
ZUL	Zurich--Lageren, Switzerland
ZUR	Zurich, Switzerland

* These codes do not correspond to the international station codes.

APPENDIX 5
MODIFIED MERCALLI INTENSITY SCALE OF 1931 (UNABRIDGED)
(Wood and Neumann, 1931)

I. Not felt - or, except rarely under especially favorable circumstances. Under certain conditions, at and outside the boundary of the area in which a great shock is felt; sometimes, birds, animals, reported uneasy or disturbed; sometimes dizziness or nausea experienced; sometimes trees, structures, liquids, bodies of water, may sway--doors may swing, very slowly.

II. Felt indoors by few, especially on upper floors, or by sensitive or nervous persons. Also, as in grade I, but often more noticeably: sometimes hanging objects may swing, especially where delicately suspended; sometimes trees, structures, liquids, bodies of water, may sway, doors may swing, very slowly; sometimes birds, animals, reported uneasy or disturbed; sometimes dizziness or nausea experienced.

III. Felt indoors by several, motion usually rapid vibration. Sometimes not recognized to be an earthquake at first. Duration estimated in some cases. Vibration like that due to passing of light, or lightly loaded trucks, or heavy trucks some distance away. Hanging objects may swing slightly. Movements may be appreciable on upper levels of tall structures. Rocked standing motor cars slightly.

IV. Felt indoors by many, outdoors by few. Awakened few, especially light sleepers. Frightened no one, unless apprehensive from previous experience. Vibrations like that due to passing of heavy, or heavily loaded trucks. Sensation like heavy body striking building, or falling of heavy objects inside. Rattling of dishes, windows, doors; glassware or crockery clink and clash. Creaking of walls, frame, especially in the upper range of this grade. Hanging objects swung, in numerous instances. Disturbed liquids in open vessels slightly. Rocked standing motor cars noticeably.

V. Felt indoors by practically all, outdoors by many or most: outdoors direction estimated. Awakened many, or most. Frightened few--slight excitement, a few ran outdoors. Buildings trembled throughout. Broke dishes, glassware, to some extent. Cracked windows--in some cases, but not generally. Overturned vases, small or unstable objects, in many instances, with occasional fall. Hanging objects, doors, swing generally or considerably. Knocked pictures against walls, or swung them out of place. Opened, or closed, doors, shutters, abruptly. Pendulum clocks stopped, started, or ran fast, or slow. Moved small objects, furnishings, the latter to slight extent. Spilled liquids in small amounts from well-filled open containers. Trees, bushes, shaken slightly.

VI. Felt by all, indoors and outdoors. Frightened many, excitement general, some bushes, shaken slightly to moderately. Liquid set in strong motion. Small church bells rang--church, chapel, school, etc. Damage slight in poorly built buildings. Fall of plaster in small amount. Cracked plaster somewhat, especially fine cracks in chimneys in some instances. Broke dishes, glassware, in considerable quantity, also some windows. Fall of knickknacks, books, pictures. Overturned furniture in many instances. Moved furnishings of moderately heavy kind.

VII. Frightened all--general alarm, all ran outdoors. Some, or many, found it difficult to stand. Noticed by persons driving motor cars. Trees and bushes shaken moderately to strongly. Waves on ponds, lakes, and running water. Water turbid from mud stirred up. In-caving to some extent of sand or gravel streambanks. Rang large church bells, etc. Suspended objects made to quiver. Damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary buildings, considerable in poorly built or badly designed buildings, adobe houses, old walls (especially where laid up without mortar), spires, etc. Cracked chimneys to considerable extent, walls to some extent. Fall of plaster in considerable to large amount, also some stucco. Broke numerous windows, furniture to some extent. Shook down loosened brickwork and tiles. Broke weak chimneys at the roofline (sometimes damaging roofs). Fall of cornices from towers and high buildings. Dislodged bricks and stones. Overturned heavy furniture, with damage from breaking. Damage considerable to concrete irrigation ditches.

VIII. Fright general--alarm approaches panic. Disturbed persons driving motor cars. Trees shaken strongly--branches, trunks, broken off, especially palm trees. Ejected sand and mud in small amounts. Changes: temporary, permanent; in flows of springs and wells; dry wells renewed flow; in temperature of spring and well waters. Damage slight in structures (brick) built especially to withstand earthquakes. Considerable in ordinary substantial buildings, partial collapse: racked, tumbled down, wooden houses in some cases; threw out panel walls in frame structures, broke off decayed piling. Fall of walls. Cracked, broke, solid stone walls seriously. Wet ground to some extent, also ground on steep slopes. Twisting, fall, of chimneys, columns, monuments, also factory stacks, towers. Moved conspicuously, overturned, very heavy furniture.

IX. Panic general. Cracked ground conspicuously. Damage considerable in (masonry) structures built especially to withstand earthquakes: threw out of plumb some wood-frame houses built especially to withstand earthquakes; great in substantial (masonry) buildings, some collapse in large part; or wholly shifted frame buildings off foundations, racked frames; serious to reservoirs; underground pipes sometimes broken.

X. Cracked ground, especially where loose and wet, up to widths of several inches; fissures up to a yard in width ran parallel to canal and streambanks. Landslides considerable from riverbanks and steep coasts. Shifted sand and mud horizontally on beaches and flat land. Changed level of water in wells. Threw water on banks of canals, lakes, rivers, etc. Damage serious to dams, dikes, embankments. Severe to well-built wooden structures and bridges, some destroyed. Developed dangerous cracks in excellent brick walls. Destroyed most masonry and frame structures, also their foundations. Bent railroad rails slightly. Tore apart, or crushed endwise, pipelines buried in earth. Open cracks and broad wavy folds in cement pavements and asphalt road surfaces.

XI. Disturbances ground many and widespread, varying with ground material. Broad fissures, earth slumps, and land slips in soft, wet ground. Ejected water in large amounts charged with sand and mud. Caused sea waves ("tidal" waves) of significant magnitude. Damage severe to wood-frame structures, especially near shock centers. Great to dams, dikes, embankments, often for long distances. Few, if any, (masonry) structures remained standing. Destroyed large well-built bridges by the wrecking of supporting piers, or pillars. Affected yielding wooden bridges less. Bent railroad rails greatly, and thrust them endwise. Put pipelines buried in earth completely out of service.

XII. Damage total--practically all works of construction damaged greatly or destroyed. Disturbances in ground great and varied, numerous shearing cracks. Landslides, falls of rock of significant character, slumping of riverbanks, etc., numerous and extensive. Wrenched loose, tore off, large rock masses. Fault slips in firm rock, with notable horizontal and vertical offset displacements. Water channels, surface and underground, disturbed and modified greatly. Dammed lakes, produced waterfalls, deflected rivers, etc. Waves seen on ground surfaces (actually seen, probably, in some cases). Distorted lines of sight and level. Threw objects upward into the air.

Comparison of Modified Mercalli (MM) and Other Intensity Scales

Modified Mercalli--1931 (MM)	Rossi-Forel--1950 (RF)	Japanese--1950 (JMA)	European (Mercalli-Cancani-Sieberg)--1917	USSR, Inst. Phys. Earth (Medvedev, 1962)--1952
I	I	0	I	I
II	I-II	I	II	II
III	III	II	III	III
IV	IV-V	II-III	IV	IV
V	V-VI	III	V	V
VI	VI-VII	IV	VI	VI
VII	VIII-	IV-V	VII	VII
VIII	VIII+ to IX-	V	VIII	VIII
IX	IX+	V-VI	IX	IX
X	X	VI	X	X
XI	---	VII	XI	XI
XII	---	---	XII	XII

APPENDIX 6
FLINN-ENGDAHL REGIONS (Flinn and others, 1974)

1 CENTRAL ALASKA
2 SOUTHERN ALASKA
3 BERING SEA
4 KOMANDORSKY ISLANDS REGION
5 NEAR ISLANDS, ALEUTIAN ISLANDS
6 RAT ISLANDS, ALEUTIAN ISLANDS
7 ANDREANOF ISLANDS, ALEUTIAN ISLANDS
8 PRIBILOF ISLANDS
9 FOX ISLANDS, ALEUTIAN ISLANDS
10 UNIMAK ISLAND REGION
11 BRISTOL BAY
12 ALASKA PENINSULA
13 KODIAK ISLAND REGION
14 KENAI PENINSULA, ALASKA
15 GULF OF ALASKA
16 ALEUTIAN ISLANDS REGION
17 SOUTH OF ALASKA
18 SOUTHERN YUKON TERRITORY, CANADA
19 SOUTHEASTERN ALASKA
20 OFF COAST OF SOUTHEASTERN ALASKA
21 WEST OF VANCOUVER ISLAND
22 QUEEN CHARLOTTE ISLANDS REGION
23 BRITISH COLUMBIA
24 ALBERTA PROVINCE, CANADA
25 VANCOUVER ISLAND REGION
26 OFF COAST OF WASHINGTON
27 NEAR COAST OF WASHINGTON
28 WASHINGTON-OREGON BORDER REGION
29 WASHINGTON
30 OFF COAST OF OREGON
31 NEAR COAST OF OREGON
32 OREGON
33 WESTERN IDAHO
34 OFF COAST OF NORTHERN CALIFORNIA
35 NEAR COAST OF NORTHERN CALIFORNIA
36 NORTHERN CALIFORNIA
37 NEVADA
38 OFF COAST OF CALIFORNIA
39 CENTRAL CALIFORNIA
40 CALIFORNIA-NEVADA BORDER REGION
41 SOUTHERN NEVADA
42 WESTERN ARIZONA
43 SOUTHERN CALIFORNIA
44 CALIFORNIA-ARIZONA BORDER REGION
45 CALIFORNIA-MEXICO BORDER REGION
46 W. ARIZ. - MEXICO BORDER REGION
47 OFF W. COAST OF BAJA CALIFORNIA
48 BAJA CALIFORNIA
49 GULF OF CALIFORNIA
50 NORTHWESTERN MEXICO
51 OFF COAST OF CENTRAL MEXICO
52 NEAR COAST OF CENTRAL MEXICO
53 REVILLA GIGEDO ISLANDS REGION
54 OFF COAST OF JALISCO, MEXICO
55 NEAR COAST OF JALISCO, MEXICO
56 NEAR COAST OF MICHOACAN, MEXICO
57 MICHOACAN, MEXICO
58 NEAR COAST OF GUERRERO, MEXICO
59 GUERRERO, MEXICO
60 OAXACA, MEXICO
61 CHIAPAS, MEXICO
62 MEXICO-GUATEMALA BORDER REGION
63 OFF COAST OF MEXICO
64 OFF COAST OF MICHOACAN, MEXICO
65 OFF COAST OF GUERRERO, MEXICO
66 NEAR COAST OF OAXACA, MEXICO
67 OFF COAST OF OAXACA, MEXICO
68 OFF COAST OF CHIAPAS, MEXICO
69 NEAR COAST OF CHIAPAS, MEXICO
70 GUATEMALA
71 NEAR COAST OF GUATEMALA
72 HONDURAS
73 EL SALVADOR
74 NEAR COAST OF NICARAGUA
75 NICARAGUA
76 OFF COAST OF CENTRAL AMERICA
77 OFF COAST OF COSTA RICA
78 COSTA RICA
79 NORTH OF PANAMA
80 PANAMA-COSTA RICA BORDER REGION
81 PANAMA
82 PANAMA-COLOMBIA BORDER REGION
83 SOUTH OF PANAMA
84 YUCATAN PENINSULA
85 CUBA REGION
86 JAMAICA REGION
87 HAITI REGION
88 DOMINICAN REPUBLIC REGION
89 MONA PASSAGE
90 PUERTO RICO REGION
91 VIRGIN ISLANDS
92 LEEWARD ISLANDS
93 BELIZE
94 CARIBBEAN SEA
95 WINDWARD ISLANDS
96 NEAR NORTH COAST OF COLOMBIA
97 NEAR COAST OF VENEZUELA
98 TRINIDAD
99 NORTHERN COLOMBIA
100 LAKE MARACAIBO
101 VENEZUELA
102 NEAR WEST COAST OF COLOMBIA
103 COLOMBIA
104 OFF COAST OF ECUADOR
105 NEAR COAST OF ECUADOR
106 COLOMBIA-ECUADOR BORDER REGION
107 ECUADOR
108 OFF COAST OF NORTHERN PERU
109 NEAR COAST OF NORTHERN PERU
110 PERU-ECUADOR BORDER REGION
111 NORTHERN PERU
112 PERU-BRAZIL BORDER REGION
113 WESTERN BRAZIL
114 OFF COAST OF PERU
115 NEAR COAST OF PERU
116 PERU
117 SOUTHERN PERU
118 PERU-BOLIVIA BORDER REGION
119 NORTHERN BOLIVIA
120 BOLIVIA
121 OFF COAST OF NORTHERN CHILE
122 NEAR COAST OF NORTHERN CHILE
123 NORTHERN CHILE
124 CHILE-BOLIVIA BORDER REGION
125 SOUTHERN BOLIVIA
126 PARAGUAY
127 CHILE-ARGENTINA BORDER REGION
128 JUJUY PROVINCE, ARGENTINA
129 SALTA PROVINCE, ARGENTINA
130 CATAMARCA PROVINCE, ARGENTINA
131 TUCUMAN PROVINCE, ARGENTINA
132 SANTIAGO DEL ESTERO PROV., ARG.
133 NORTHEASTERN ARGENTINA
134 OFF COAST OF CENTRAL CHILE
135 NEAR COAST OF CENTRAL CHILE
136 CENTRAL CHILE
137 SAN JUAN PROVINCE, ARGENTINA
138 LA RIOJA PROVINCE, ARGENTINA
139 MENDOZA PROVINCE, ARGENTINA
140 SAN LUIS PROVINCE, ARGENTINA
141 CORDOBA PROVINCE, ARGENTINA
142 URUGUAY
143 OFF COAST OF SOUTHERN CHILE
144 NEAR COAST OF SOUTHERN CHILE
145 S. CHILE-ARGENTINA BORDER REGION
146 ARGENTINA

147 TIERRA DEL FUEGO
148 FALKLAND ISLANDS REGION
149 DRAKE PASSAGE
150 SCOTIA SEA
151 SOUTH GEORGIA ISLAND REGION
152 SOUTH GEORGIA RISE
153 SOUTH SANDWICH ISLANDS REGION
154 SOUTH SHETLAND ISLANDS
155 ANTARCTIC PENINSULA
156 SOUTHWESTERN ATLANTIC OCEAN
157 WEDDELL SEA
158 OFF W. COAST OF N. ISLAND, N.Z.
159 NORTH ISLAND, NEW ZEALAND
160 OFF E. COAST OF N. ISLAND, N.Z.
161 OFF W. COAST OF S. ISLAND, N.Z.
162 SOUTH ISLAND, NEW ZEALAND
163 COOK STRAIT, NEW ZEALAND
164 OFF E. COAST OF S. ISLAND, N.Z.
165 NORTH OF MACQUARIE ISLAND
166 AUCKLAND ISLANDS REGION
167 MACQUARIE ISLAND S. REGION
168 SOUTH OF NEW ZEALAND
169 SAMOA ISLANDS REGION
170 SAMOA ISLANDS
171 SOUTH OF FIJI ISLANDS
172
173 TONGA ISLANDS
174 TONGA ISLANDS REGION
175 SOUTH OF TONGA ISLANDS
176 NORTH OF NEW ZEALAND
177 KERMADEC ISLANDS REGION
178 KERMADEC ISLANDS
179 SOUTH OF KERMADEC ISLANDS
180 NORTH OF FIJI ISLANDS
181 FIJI ISLANDS REGION
182 FIJI ISLANDS
183 SANTA CRUZ ISLANDS REGION
184 SANTA CRUZ ISLANDS
185 VANUATU ISLANDS REGION
186 VANUATU ISLANDS
187 NEW CALEDONIA
188 LOYALTY ISLANDS
189 LOYALTY ISLANDS REGION
190 NEW IRELAND REGION
191 NORTH OF SOLOMON ISLANDS
192 NEW BRITAIN REGION
193 SOLOMON ISLANDS
194 DENTRECASTEAUX ISLANDS REGION
195 SOLOMON ISLANDS REGION
196 WEST IRIAN REGION
197 NEAR N. COAST OF WEST IRIAN
198 PAPUA NEW GUINEA REGION
199 ADMIRALTY ISLANDS REGION
200 NEAR N. COAST OF PAPUA NEW GUINEA
201 WEST IRIAN
202 PAPUA NEW GUINEA
203 BISMARCK SEA
204 AROE ISLANDS REGION
205 NEAR S. COAST OF WEST IRIAN
206 NEAR SOUTH COAST OF PAPUA NEW GUINEA
207 EAST PAPUA NEW GUINEA REGION
208 ARAFURA SEA
209 WEST CAROLINE ISLANDS
210 SOUTH OF MARIANA ISLANDS
211 SOUTH OF HONSHU, JAPAN
212 BONIN ISLANDS REGION
213 VOLCANO ISLANDS REGION
214 WEST OF MARIANA ISLANDS
215 MARIANA ISLANDS REGION
216 MARIANA ISLANDS
217 KAMCHATKA
218 NEAR EAST COAST OF KAMCHATKA
219 OFF EAST COAST OF KAMCHATKA
220 NORTHWEST OF KURIL ISLANDS
221 KURIL ISLANDS
222 KURIL ISLANDS REGION
223 EASTERN SEA OF JAPAN
224 HOKKAIDO, JAPAN, REGION
225 OFF COAST OF HOKKAIDO, JAPAN
226 NEAR WEST COAST OF HONSHU, JAPAN
227 HONSHU, JAPAN
228 NEAR EAST COAST OF HONSHU, JAPAN
229 OFF EAST COAST OF HONSHU, JAPAN
230 NEAR S. COAST OF HONSHU, JAPAN
231 SOUTH KOREA
232 SOUTHERN HONSHU, JAPAN
233 NEAR S. COAST OF SOUTHERN HONSHU
234 EAST CHINA SEA
235 KYUSHU, JAPAN
236 SHIKOKU, JAPAN
237 SOUTHEAST OF SHIKOKU, JAPAN
238 RYUKYU ISLANDS
239 RYUKYU ISLANDS REGION
240 EAST OF RYUKYU ISLANDS
241 PHILIPPINE SEA
242 NEAR SOUTHEASTERN COAST OF CHINA
243 TAIWAN REGION
244 TAIWAN
245 NORTHEAST OF TAIWAN
246 SOUTHWESTERN RYUKYU ISLANDS
247 SOUTHEAST OF TAIWAN
248 PHILIPPINE ISLANDS REGION
249 LUZON, PHILIPPINE ISLANDS
250 MINDORO, PHILIPPINE ISLANDS
251 SAMAR, PHILIPPINE ISLANDS
252 PALAWAN, PHILIPPINE ISLANDS
253 SULU SEA
254 PANAY, PHILIPPINE ISLANDS
255 CEBU, PHILIPPINE ISLANDS
256 LEYTE, PHILLIPINE ISLANDS
257 NEGROS, PHILIPPINE ISLANDS
258 SULU ARCHIPELAGO
259 MINDANAO, PHILIPPINE ISLANDS
260 EAST OF PHILIPPINE ISLANDS
261 KALIMANTAN
262 CELEBES SEA
263 TALAUD ISLANDS
264 NORTH OF HALMAHERA
265 MINAHASSA PENINSULA
266 MOLUCCA PASSAGE
267 HALMAHERA
268 SULAWESI
269 MOLUCCA SEA
270 CERAM SEA
271 BURU
272 CERAM
273 SOUTHWEST OF SUMATERA
274 SOUTHERN SUMATERA
275 JAVA SEA
276 SUNDA STRAIT
277 JAVA
278 BALI SEA
279 FLORES SEA
280 BANDA SEA
281 TANIMBAR ISLANDS REGION
282 SOUTH OF JAVA
283 BALI ISLAND REGION
284 SOUTH OF BALI ISLAND
285 SUMBAWA ISLAND REGION
286 FLORES ISLAND REGION
287 SUMBA ISLAND REGION
288 SAVU SEA
289 TIMOR
290 TIMOR SEA
291 SOUTH OF SUMBAWA ISLAND
292 SOUTH OF SUMBA ISLAND

293 SOUTH OF TIMOR
294 BURMA-INDIA BORDER REGION
295 BURMA-BANGLADESH BORDER REGION
296 BURMA
297 BURMA-CHINA BORDER REGION
298 SOUTH BURMA
299 SOUTHEAST ASIA
300 HAINAN ISLAND
301 SOUTH CHINA SEA
302 EASTERN KASHMIR
303 KASHMIR-INDIA BORDER REGION
304 KASHMIR-TIBET BORDER REGION
305 TIBET-INDIA BORDER REGION
306 TIBET
307 SICHUAN PROVINCE, CHINA
308 NORTHERN INDIA
309 NEPAL-INDIA BORDER REGION
310 NEPAL
311 SIKKIM
312 BHUTAN
313 INDIA-CHINA BORDER REGION
314 INDIA
315 INDIA-BANGLADESH BORDER REGION
316 BANGLADESH
317 EASTERN INDIA
318 YUNNAN PROVINCE, CHINA
319 BAY OF BENGAL
320 KIRGHIZ-XINJIANG BORDER REGION
321 SOUTHERN XINJIANG PROV., CHINA
322 GANSU PROVINCE, CHINA
323 NORTHERN CHINA
324 KASHMIR-XINJIANG BORDER REGION
325 QINGHAI PROVINCE, CHINA
326 CENTRAL USSR
327 LAKE BAIKAL REGION
328 EAST OF LAKE BAIKAL
329 EASTERN KAZAKH SSR
330 ALMA-ATA REGION
331 KAZAKH-XINJIANG BORDER REGION
332 NORTHERN XINJIANG PROV., CHINA
333 USSR-MONGOLIA BORDER REGION
334 MONGOLIA
335 URAL MOUNTAINS REGION
336 WESTERN KAZAKH SSR
337 EASTERN CAUCASUS
338 CASPIAN SEA
339 UZBEK SSR
340 TURKMEN SSR
341 IRAN-USSR BORDER REGION
342 TURKMEN-AFGANISTAN BORDER REGION
343 TURKEY-IRAN BORDER REGION
344 N.W. IRAN-USSR BORDER REGION
345 NORTHWESTERN IRAN
346 IRAN-IRAQ BORDER REGION
347 WESTERN IRAN
348 IRAN
349 NORTHWESTERN AFGHANISTAN
350 SOUTHWESTERN AFGHANISTAN
351 EASTERN ARABIAN PENINSULA
352 PERSIAN GULF
353 SOUTHERN IRAN
354 PAKISTAN
355 GULF OF OMAN
356 NEAR COAST OF PAKISTAN
357 SOUTHWESTERN USSR
358 ROMANIA
359 BULGARIA
360 BLACK SEA
361 CRIMEA REGION
362 WESTERN CAUCASUS
363 GREECE-BULGARIA BORDER REGION
364 GREECE
365 AEGEAN SEA
366 TURKEY
367 TURKEY-USSR BORDER REGION
368 SOUTHERN GREECE
369 DODECANESE ISLANDS
370 CRETE
371 EASTERN MEDITERRANEAN SEA
372 CYPRUS
373 DEAD SEA REGION
374 JORDAN - SYRIA REGION
375 IRAQ
376 PORTUGAL
377 SPAIN
378 PYRENEES
379 NEAR SOUTH COAST OF FRANCE
380 CORSICA
381 CENTRAL ITALY
382 ADRIATIC SEA
383 YUGOSLAVIA
384 WEST OF GIBRALTAR
385 STRAIT OF GIBRALTER
386 BALEARIC ISLANDS
387 WESTERN MEDITERRANEAN SEA
388 SARDINIA
389 TYRRHENIAN SEA
390 SOUTHERN ITALY
391 ALBANIA
392 GREECE-ALBANIA BORDER REGION
393 MADEIRA ISLANDS REGION
394 CANARY ISLANDS REGION
395 MOROCCO
396 ALGERIA
397 TUNISIA
398 SICILY
399 IONIAN SEA
400 MEDITERRANEAN SEA
401 NEAR COAST OF LIBYA
402 NORTH ATLANTIC OCEAN
403 NORTH ATLANTIC RIDGE
404 AZORES ISLANDS REGION
405 AZORES ISLANDS
406 CENTRAL MID-ATLANTIC RIDGE
407 NORTH OF ASCENSION ISLAND
408 ASCENSION ISLAND REGION
409 SOUTH ATLANTIC OCEAN
410 SOUTH ATLANTIC RIDGE
411 TRISTAN DA CUNHA REGION
412 BOUVET ISLAND REGION
413 SOUTHWEST OF AFRICA
414 SOUTHEASTERN ATLANTIC OCEAN
415 EASTERN GULF OF ADEN
416 SOCOTRA REGION
417 ARABIAN SEA
418 LACCADIVE ISLANDS REGION
419 NORTHEASTERN SOMALIA
420 NORTH INDIAN OCEAN
421 CARLSBERG RIDGE
422 MALDIVE ISLANDS REGION
423 LACCADIVE SEA
424 SRI LANKA
425 SOUTH INDIAN OCEAN
426 CHAGOS ARCHIPELAGO REGION
427 MASCARENE ISLANDS REGION
428 ATLANTIC-INDIAN RISE
429 MID-INDIAN RISE
430 SOUTH OF AFRICA
431 PRINCE EDWARD ISLANDS REGION
432 CROZET ISLANDS REGION
433 KERGUELEN ISLANDS REGION
434 AMSTERDAM-NATURALISTE RIDGE
435 SOUTHEAST INDIAN RISE
436 KERGUELEN-GAUSSBERG RISE
437 SOUTH OF AUSTRALIA
438 SASKATCHEWAN PROVINCE, CANADA

439 MANITOBA PROVINCE, CANADA
440 HUDSON BAY
441 ONTARIO
442 HUDSON STRAIT REGION
443 NORTHERN QUEBEC
444 DAVIS STRAIT
445 LABRADOR
446 EAST OF LABRADOR
447 SOUTHERN QUEBEC
448 GASPE PENINSULA
449 EASTERN QUEBEC
450 ANTICOSTI ISLAND, CANADA
451 NEW BRUNSWICK
452 NOVA SCOTIA
453 PRINCE EDWARD ISLAND, CANADA
454 GULF OF ST. LAWRENCE
455 NEWFOUNDLAND
456 MONTANA
457 EASTERN IDAHO
458 HEBGEN LAKE REGION
459 YELLOWSTONE NATIONAL PARK, WYO.
460 WYOMING
461 NORTH DAKOTA
462 SOUTH DAKOTA
463 NEBRASKA
464 MINNESOTA
465 IOWA
466 WISCONSIN
467 ILLINOIS
468 MICHIGAN
469 INDIANA
470 SOUTHERN ONTARIO
471 OHIO
472 NEW YORK
473 PENNSYLVANIA
474 NORTHERN NEW ENGLAND
475 MAINE
476 SOUTHERN NEW ENGLAND
477 GULF OF MAINE
478 UTAH
479 COLORADO
480 KANSAS
481 IOWA-MISSOURI BORDER REGION
482 MISSOURI-KANSAS BORDER REGION
483 MISSOURI
484 MISSOURI-ARKANSAS BORDER REGION
485 EASTERN MISSOURI
486 NEW MADRID, MISSOURI, REGION
487 CAPE GIRARDEAU, MISSOURI, REGION
488 SOUTHERN ILLINOIS
489 SOUTHERN INDIANA
490 KENTUCKY
491 WEST VIRGINIA
492 VIRGINIA
493 CHESAPEAKE BAY REGION
494 NEW JERSEY
495 EASTERN ARIZONA
496 NEW MEXICO
497 TEXAS PANHANDLE REGION
498 WEST TEXAS
499 OKLAHOMA
500 CENTRAL TEXAS
501 ARKANSAS-OKLAHOMA BORDER REGION
502 ARKANSAS
503 LOUISIANA-TEXAS BORDER REGION
504 LOUISIANA
505 MISSISSIPPI
506 TENNESSEE
507 ALABAMA
508 WESTERN FLORIDA
509 GEORGIA
510 FLORIDA-GEORGIA BORDER REGION
511 SOUTH CAROLINA
512 NORTH CAROLINA
513 OFF EAST COAST OF UNITED STATES
514 FLORIDA PENINSULA
515 BAHAMA ISLANDS
516 E. ARIZ. - MEXICO BORDER REGION
517 MEXICO-NEW MEXICO BORDER REGION
518 TEXAS-MEXICO BORDER REGION
519 SOUTHERN TEXAS
520 TEXAS GULF COAST
521 CHICHUAHUA, MEXICO
522 NORTHERN MEXICO
523 CENTRAL MEXICO
524 JALISCO, MEXICO
525 VERA CRUZ, MEXICO
526 GULF OF MEXICO
527 GULF OF CAMPECHE
528 BRAZIL
529 GUYANA
530 SURINAM
531 FRENCH GUIANA
532 EIRE
533 UNITED KINGDOM
534 NORTH SEA
535 SOUTHERN NORWAY
536 SWEDEN
537 BALTIC SEA
538 FRANCE
539 BAY OF BISCAY
540 NETHERLANDS
541 BELGIUM
542 DENMARK
543 GERMANY
544 SWITZERLAND
545 NORTHERN ITALY
546 AUSTRIA
547 CZECHOSLOVAKIA
548 POLAND
549 HUNGARY
550 NORTHWEST AFRICA
551 SOUTHERN ALGERIA
552 LIBYA
553 ARAB REPUBLIC OF EGYPT
554 RED SEA
555 WESTERN ARABIAN PENINSULA
556 CENTRAL AFRICA
557 SUDAN
558 ETHIOPIA
559 WESTERN GULF OF ADEN
560 NORTHWESTERN SOMALIA
561 OFF S. COAST OF NORTHWEST AFRICA
562 CAMEROON
563 EQUATORIAL GUINEA
564 CENTRAL AFRICAN REPUBLIC
565 GABON
566 CONGO REPUBLIC
567 ZAIRE REPUBLIC
568 UGANDA
569 LAKE VICTORIA REGION
570 KENYA
571 SOUTHERN SOMALIA
572 LAKE TANGANYIKA REGION
573 TANZANIA
574 NORTHWEST OF MADAGASCAR
575 ANGOLA
576 ZAMBIA
577 MALAWI
578 NAMIBIA
579 BOTSWANA REPUBLIC
580 ZIMBABWE
581 MOZAMBIQUE
582 MOZAMBIQUE CHANNEL
583 MALAGASAY REPUBLIC
584 REPUBLIC OF SOUTH AFRICA

585 LESOTHO
586 SWAZILAND
587 OFF COAST OF SOUTH AFRICA
588 NORTHWEST OF AUSTRALIA
589 WEST OF AUSTRALIA
590 WESTERN AUSTRALIA
591 NORTHERN TERRITORY, AUSTRALIA
592 SOUTH AUSTRALIA
593 GULF OF CARPENTERIA
594 QUEENSLAND, AUSTRALIA
595 CORAL SEA
596 SOUTH OF SOLOMON ISLANDS
597 NEW CALEDONIA REGION
598 SOUTHWEST OF AUSTRALIA
599 OFF SOUTH COAST OF AUSTRALIA
600 NEAR SOUTH COAST OF AUSTRALIA
601 NEW SOUTH WALES, AUSTRALIA
602 VICTORIA, AUSTRALIA
603 NEAR S.E. COAST OF AUSTRALIA
604 NEAR EAST COAST OF AUSTRALIA
605 EAST OF AUSTRALIA
606 NORFOLK ISLAND REGION
607 NORTHWEST OF NEW ZEALAND
608 BASS STRAIT
609 TASMANIA REGION
610 SOUTHEAST OF AUSTRALIA
611 NORTH PACIFIC OCEAN
612 HAWAII REGION
613 HAWAII
614 CAROLINE ISLANDS REGION
615 MARSHALL ISLANDS REGION
616 ENIWETOK ATOLL REGION
617 BIKINI ATOLL REGION
618 GILBERT ISLANDS REGION
619 JOHNSTON ISLAND REGION
620 LINE ISLANDS REGION
621 PALMYRA ISLAND REGION
622 CHRISTMAS ISLAND REGION
623 ELLICE ISLANDS REGION
624 PHOENIX ISLANDS REGION
625 TEKELAU ISLANDS REGION
626 NORTHERN COOK ISLANDS
627 COOK ISLANDS REGION
628 SOCIETY ISLANDS REGION
629 TUBUAI ISLANDS REGION
630 MARQUESAS ISLANDS REGION
631 TUAMOTU ARCHIPELAGO REGION
632 SOUTH PACIFIC OCEAN
633 LOMONOSOV RIDGE
634 ARCTIC OCEAN
635 NEAR NORTH COAST OF GREENLAND
636 EASTERN GREENLAND
637 ICELAND REGION
638 ICELAND
639 JAN MAYEN ISLAND REGION
640 GREENLAND SEA
641 NORTH OF SVALBARD
642 NORWEGIAN SEA
643 SVALBARD REGION
644 NORTH OF FRANZ JOSEF LAND
645 FRANZ JOSEF LAND
646 NORTHERN NORWAY
647 BARENTS SEA
648 NOVAYA ZEMLYA
649 KARA SEA
650 NEAR COAST OF WESTERN SIBERIA
651 NORTH OF SEVERNAYA ZEMLYA
652 SEVERNAYA ZEMLYA
653 NEAR COAST OF CENTRAL SIBERIA
654 EAST OF SEVERNAYA ZEMLYA
655 LAPTEV SEA
656 EASTERN USSR
657 E. USSR-N.E. CHINA BORDER REGION
658 NORTHEASTERN CHINA
659 NORTH KOREA
660 SEA OF JAPAN
661 NEAR E. COAST OF EASTERN USSR
662 SAKHALIN ISLAND
663 SEA OF OKHOTSK
664 EASTERN CHINA
665 YELLOW SEA
666 OFF COAST OF EASTERN CHINA
667 NORTH OF NEW SIBERIAN ISLANDS
668 NEW SIBERIAN ISLANDS
669 EAST SIBERIAN SEA
670 NEAR N. COAST OF EASTERN SIBERIA
671 EASTERN SIBERIA
672 CHUKCHI SEA
673 BERING STRAIT
674 ST. LAWRENCE ISLAND REGION
675 BEAUFORT SEA
676 ALASKA
677 NORTHERN YUKON TERRITORY, CANADA
678 QUEEN ELIZABETH ISLANDS
679 NORTHWEST TERRITORIES, CANADA
680 WESTERN GREENLAND
681 BAFFIN BAY
682 BAFFIN ISLAND REGION
683 SOUTHEAST CENTRAL PACIFIC OCEAN
684 EASTER ISLAND CORDILLERA
685 EASTER ISLAND REGION
686 WEST CHILE RISE
687 JUAN FERNANDEZ ISLANDS REGION
688 EAST OF NORTH ISLAND, N.Z.
689 CHATHAM ISLANDS REGION
690 SOUTH OF CHATHAM ISLANDS
691 SOUTH PACIFIC CORDILLERA
692 SOUTHERN PACIFIC OCEAN
693 EAST CENTRAL PACIFIC OCEAN
694 NORTHERN EASTER I. CORDILLERA
695 WEST OF GALAPAGOS ISLANDS
696 GALAPAGOS ISLANDS REGION
697 GALAPAGOS ISLANDS
698 SOUTHWEST OF GALAPAGOS ISLANDS
699 SOUTHEAST OF GALAPAGOS ISLANDS
700 SOUTH OF TASMANIA
701 WEST OF MACQUARIE ISLAND
702 BALLENY ISLANDS REGION
703 ANDAMAN ISLANDS REGION
704 NICOBAR ISLANDS REGION
705 OFF W. COAST OF NORTHERN SUMATERA
706 NORTHERN SUMATERA
707 MALAY PENINSULA
708 GULF OF THAILAND
709 AFGHANISTAN
710 PAKISTAN
711 SOUTHWESTERN KASHMIR
712 INDIA-WEST PAKISTAN BORDER REG.
713 CENTRAL KAZAKH SSR
714 SOUTHEASTERN UZBEK SSR
715 TAJIK SSR
716 KIRGHIZ SSR
717 AFGHANISTAN-USSR BORDER REGION
718 HINDU KUSH REGION
719 TAJIK-XINJIANG BORDER REGION
720 NORTHWESTERN KASHMIR
721 FINLAND
722 NORWAY-USSR BORDER REGION
723 FINLAND-USSR BORDER REGION
724 EUROPEAN USSR
725 WESTERN SIBERIA
726 CENTRAL SIBERIA
727 VICTORIA LAND, ANTARCTICA
728 ROSS SEA
729 ANTARCTICA

APPENDIX 7
INTERNATIONAL DATA EXCHANGE (IDE) EVENTS

Date			Time (UT)			Geographic Area	Magnitude
yr	mo	da	h	m	s		M_S
74	05	10	19	25	15.0	Szechwan Province, People's Republic of China....	6.8
74	10	03	14	21	29.1	Near coast of Peru.....	7.6
74	10	08	09	50	58.1	Leeward Islands.....	7.5
75	02	02	08	43	39.1	Near Islands, Aleutian Islands.....	7.6
75	05	10	14	27	38.7	Southern Chile.....	7.8
75	05	26	09	11	51.5	North Atlantic Ocean.....	8.0
75	07	20	14	37	35.8	Solomon Islands.....	8.0
75	10	11	14	35	15.0	Tonga Islands region.....	7.5
75	11	29	14	47	40.1	Hawaii.....	7.1
75	12	26	15	56	38.7	Samoa Islands.....	7.8
76	01	14	15	56	54.5	Kermadec Islands.....	7.8
76	01	14	16	47	28.6	Kermadec Islands.....	8.0
76	02	04	09	01	46.0	Guatemala.....	7.5
76	05	06	20	00	11.6	Northeastern Italy.....	6.5
76	07	27	19	42	56.2	Hopeh Province, People's Republic of China.....	8.0
76	08	16	16	11	07.2	Moro Gulf, Philippine Islands.....	8.0
76	11	24	12	22	18.1	Eastern Turkey.....	7.5
77	03	04	19	21	51.1	Rumania.....	7.2
77	04	02	07	15	25.0	Tonga Islands.....	7.5
77	04	20	23	42	50.5	Solomon Islands.....	7.5
77	04	20	23	49	13.1	Solomon Islands.....	7.5
77	04	21	04	24	09.6	Solomon Islands.....	7.8
78	03	24	00	42	38.1	South of Bermuda.....	6.0
78	06	12	08	14	26.8	Near east coast of Honshu, Japan.....	7.5
78	09	16	15	35	56.1	Iran.....	7.7
78	11	04	22	29	21.6	Solomon Islands.....	7.0
78	11	05	22	02	07.8	Solomon Islands.....	7.5
78	11	29	19	52	51.0	Oaxaca, Mexico.....	7.8
79	01	16	09	50	11.6	Eastern Iran.....	6.7
79	02	28	21	27	05.2	Southeastern Alaska.....	7.7
79	03	14	11	07	13.7	Guerrero, Mexico.....	7.7
79	04	15	06	19	49.7	West Iran.....	7.9
79	10	15	23	16	55.1	California-Mexico border.....	6.8
79	12	12	07	59	04.3	Coast of Ecuador.....	7.9
80	07	08	23	19	19.4	Santa Cruz Islands.....	7.5
80	07	17	19	42	22.5	Santa Cruz Islands.....	7.8
80	10	10	12	25	23.7	Northern Algeria.....	7.3
80	11	23	18	34	53.3	Southern Italy.....	6.8
81	05	25	05	25	10.8	Off west coast of South Island, New Zealand.....	7.6
81	09	01	09	29	32.0	Tonga Islands.....	7.6
82	01	09	12	53	51.8	New Brunswick.....	5.7
82	12	19	17	43	55.9	South of Tonga Islands.....	7.7
83	03	18	09	05	45.3	New Ireland region.....	7.9
83	05	26	02	59	59.6	Near west coast of Honshu, Japan.....	7.7
83	10	28	14	06	06.6	Eastern Idaho.....	7.3
83	11	30	17	46	00.4	Chagos Archipelago Region.....	7.6
84	02	07	21	33	20.5	Solomon Islands.....	7.5
85	03	03	22	47	06.9	Near Coast of Central Chile.....	7.9

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